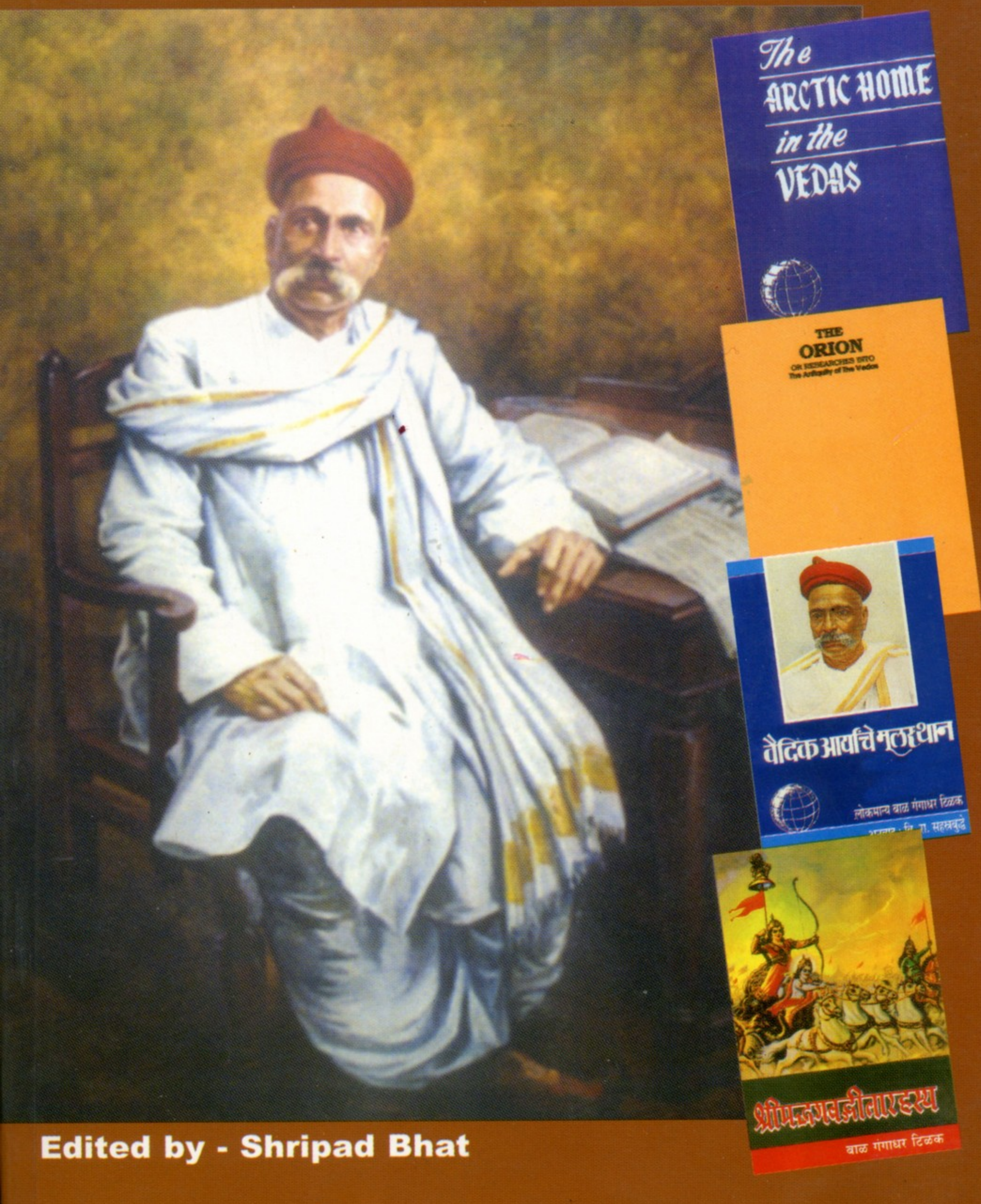
Contribution of Lokamanya Tilak to Indian Studies



Edited by - Shripad Bhat

Contribution of Lokamanya Tilak to Indian Studies

(Proceedings of the National Seminar held on July 31 and August 01, 2006)

Edited by

Shripad Bhat

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Tilak Maharastra Vidyapeeth

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Edited by

Shripad Bhat (M.A., Ph.D.)

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Foreword

It gives me immense pleasure to write a foreword to this volume, "Contribution of Lokamanya Tilak to Indian Studies". The year 2006 marks the 150th Birth Anniversary of the Lokamanya and it was thought apt that a national seminar be organised to discuss and highlight his contributions to varied fields.

The Department of Sanskrit and Asian Studies took up the challenge and successfully organized a national seminar in July 2005. It is also commendable that they have brought out the proceedings of the same in a book form within one year. I am glad that the book is being released on 1st August 2006, the death anniversary of the Lokamanya. It is the most appropriate tribute to the memory of the great leader of the Indian Freedom Movement and the great scholar. There cannot be a second opinion that his works, such as *'Gītārahasya', 'The Arctic Home in the Vedas', 'The Orion' and 'Vedic Chronology* and *other Essays'* have made great impact on the Indological studies in particular and in other intellectual fields in general.

I am happy to present this book, that fulfills a longstanding need of providing the reader with a comprehensive glance to various aspects of the Lokamanya's thought and philosophy.

Deepak Tilak
Vice-chancellor
Tilak maharashtra Vidyapeeth
Pune 411 037

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Preface

Lokamanya Bal Gangadhar Tilak, the father of Indian unrest, was a great political leader, scholar, mathematician and philosopher. He devoted his whole life for the cause of freedom of India. Besides his unequivocal contribution to the struggle for freedom, he is held in high esteem for his monumental work, the Gītārahasya, his own commentary on the Bhagavadgītā, in which he expounded the philosophy of Karmayoga. He is also known for his research work in the field of Vedic studies, namely, The Orion and The Arctic Home in the Vedas. He has to his credit several essays related to Indian studies. His thoughts on education and the study of languages deserve due consideration.

On the auspicious occasion of the 85th death anniversary of the Late Lokamanya Bal Gangadhar Tilak, i.e. the 1st of August, 2005, the Balmukund Lohiya Department of Sanskrit and Asian Studies of the Tilak Maharashtra Vidyapeeth, therefore proposed to organize a one-day national seminar, in collaboration with the Kesari Mahratta Trust, Pune, and the Tilak Smarak Trust, Pune, in order to highlight the contribution of Lokamanya Tilak to

Indian studies. The following topics were suggested for this Seminar.

The Orion and the problem of the chronology of Vedic literature, The Arctic Home in the Vedas and the Aryan Problem, The Gītārahasya: Its significance in the socio-political/philosophical context, Writings of Lokamanya Tilak in the field of Sanskrit/Indological studies, Nationalistic Education in the context of Indian tradition and Lokamanya Tilak on the study of Sanskrit/Indian languages.

Here, it would not be out of place to say a few words about Lokamanya Tilak and his contribution to Indian studies. I would like to quote what Prof. P. D. Gune, a renowned Sanskritist, had said about Lokamanya: "Mr. Tilak was, from the beginning of his career, a keen Sanskritist, and had he clung to the academic profession which he had chosen in the very beginning of his career, he would have lived and died one of the greatest of Indian Orientalists of his time. But the past of his country was to him neither so important nor so attractive as its present. And for its betterment and uplift he spared neither his person not his possessions. He brought to the task patriotism, a zeal, a singleness of purpose, and a tenacity which are seldom found together. But the seed of scholarship was always there; and it sprouted up with all the luxuriance of a suppressed growth, whenever it found suitable environments. These latter were created for him in his memorable fights with the power that be. His imprisonments gave him the leisure that a scholar's and a philosopher's mind

wants most. He spent the periods of his involuntary rest in writing upon subjects which lay nearest to his heart, viz., Indian Antiquity and Philosophy. Many an eminent Indian has suffered imprisonment, but only one of them has utilized his compulsory rest in adding to the world's stock of knowledge. And that one was Bal Gangadhar Tilak." (Annals of the Bhandarkar Oriental Research Institute, Vol. 2, 1920-21, p. 85)

The writings of Lokamanya Tilak on a variety of subjects related to Indian studies evince his vast knowledge and industry. The first book he wrote on Indian antiquity was "The Orion", published in 1893. In it he has shown, to quote his words, that the astronomical statements in the Veda "unmistakably pointed out that the vernal equinox was in the constellation of Mṛga or Orion (about 4500 B.C.) during the period of the Vedic hymns, and that it had receded to the constellation of the Kṛttikās, or the Pleiades (about 2500 B. C.) in the days of Brāhmaṇas." B.C. 4500 therefore was the time of the composition of the earliest Vedic hymns according to Tilak. This view was corroborated independently of Tilak by H. Jacobi who also used the astronomical data. Some western scholars, particularly, W. D. Whitney, vehemently criticized the Tilak-Jacoby theory. Scholars like Büehler and Bloomfield did not accept this hypothesis, but also criticised Maxmüeller's theory of the artificial "periods" of ancient Sanskrit literature, according to whom the Vedic period commenced at about 1500 B. C.. The main points of opponents of Tilak and Jacobi were

that the Indians in those days did not know much about the equinoxes and that the ancient Indians were concerned only with the position of the naksatras in relation to the moon and not to the sun. Though the astronomical evidence put forth by Tilak and Jacobi was not accepted by scholars of those days, it certainly motivated scholars to find some other grounds for assuming a greater antiquity of Vedic literature and Vedic culture. The evidence of political, religious and literary history put forth during the past hundred years shows that the Vedic literature was composed around 3500 B. C., and that the Vedic culture dates back to 4500 B. C.

Lokamanya Tilak's second book "The Arctic Home in the Vedas" was published in 1903. According to Tilak, the several sacrifices, the number of dawns and other phenomena could be explained on the assumption that the ancient Aryans came down from the arctic regions. For propounding this theory, Tilak had made use of geological evidence, and while doing so, displayed a commendable grasp of the subject although he was not a specialist. The work is also of great importance for Vedic exegesis. He also wrote a book on Vedāṅga Jyotiṣa or Vedic Chronology.

Another important book is the Bhagavadgītārahasya in which he elaborated his thoery of Karmayoga. Tilak enjoyed much praise and also faced some criticism for his interpretation of the Gītā. The book was appreciated by a number of scholars as well as general readers and was

translated in a number of languages. He had prepared notes on the Brahmasūtras in Sanskrit. These notes have been published by the Tilak Maharashtra Vidyapeeth under the title "Brahmasūtravṛtti." It appears that he wanted to write a commentary on the Brahmasūtras in Sanskrit, based on the commentaries on the Sūtras by Śaṅkara and Rāmānuja.

Besides, Tilak wrote some articles, such as "Chaldean and Indian Vedas" and "The lost Sāṅkhyakārikā of Īśvarakṛṣṇa" in which he has thrown new light on the subject. In his editorials in Kesari, he also wrote on the Mahābhārata, study of Indian languages and some other topics related to Sanskrit literature. His concept of Nationalistic Education was one of the constituents of the Catuḥsūtrī for the freedom of India.

Lokamanya Tilak had also made jottings about the books he wanted to write. Some of them were related to Indian studies:

History of Hindu religion

Pre-epic History of India

The Śāṅkara Darśana (Indian Monism)

Bhagavadgītā-Rahasya Ethics

Life of Shivaji, and

Chaldea and India

Although Lokamanya Tilak has made significant contribution to Indian studies, no serious attempt has so far been made to make a fresh study of his theories in the light of the researches done and the material newly available during the last hundred

years. The present volume includes most of the papers presented in the said seminar; it also includes some essays that have been invited subsequently for this volume. I sincerely hope that this volume will shade light on various aspects of Lokamnya's scholarship and will make a good contribution to the field of Indian studies.

S. S. Bahulkar
Convenor

* * * * *

Editorial

It is a matter of great pleasure to bring out this collection of research papers on the Contribution of Lokamanya Tilak to Indian Studies. These papers were presented at the National Seminar on the theme, held at the Blamukund Lohia Department of Sanskrit & Asian Studies on July 31st and August 1, 2005 on the occasion of the 85th Death Anniversary of the Lokamanya.

Prof. M. A. Mehendale, in his Key-note Address took account of the views of the Lokamanya on the Mahābhārata and the Avesta. Eminent scholars, namely, Prof. B. B. Choubey, Chandirah; Prof. Abhijit Ghosh, Kolkata; Prof. K. D. Abhyankar, Hyderabad; Dr. Shrikrishna Watwe, Sangli; and scholars from Pune, presented their papers in the seminar. The thorough discussion on the papers gave way to revision of the presented material, the result of which is their present form.

In these papers, scholars have noticed that the works of Lokamanya Tilak, i.e. 'The Orion', 'A note on the Interpretation of Vedāṅga Jyotiṣa and the Arctic Home in the Vedas which form the starting points of Lokamanya's researches in the field. Scholars examined the validity of Tilak's theory regarding the Aryan Homeland at the Arctic Home in the light of geological and literacy evidences from the evidences found in the Ṛgveda to the recent year archeological evidences, the view of Russian scholars who accepted the Arctic Home theory propounded by Lokamanya Tilak.

The uniqueness of the Gītārahasya, in the employment of traditional Śāstric methodology of Mīmāṁsā along with modern thoughts on science of ethics as enunciated by Western Scholars like Kant, Hegel, Spensor and others have also been observed. Scholars have emphasised the salient features and the

essentiality of the Gītārahasya in the 21st century while presenting their views with certain illustrations. Besides, an attempt has been made to take an account the neglected contribution of Lokamanya Tilak to Indian studies through Tilak's numerous arcticles published in the Kesari, the Mahratta and other journals. Apart from these, Tilak's contribution to Sanskrit, Philosophy and relevance of the views of Lokamanya of modern society have been given the much importance in the seminar.

In this volume the readers will come across the views and theories adopted by Lokamanya Tilak presented in English, Sanskrit and Marathi. The section of English articles is the largest one, while Sanskrit is represented by a single article and Marathi by two.

We have taken an effort in this volume to stick, as far as possible, to the style of the respective author.

We are grateful to Dr. Deepak Tilak, the great grandson of Lokamanya and the Vice-chancellor of the Vidyapeeth, who insisted and encouraged us to organize National Seminar on Contribution of Lokamanya Tilak. We sincerely thank to the Trustees of Tilak Smaraka Trust as well as Kesari-Mahratta Trust for their financial assistance to organise the seminar. We are thankful to Dr.Umesh Keskar, the Registrar of the Vidyapeeth for his kind co-operation and for his full support to publish this volume. Thanks are also due to the printers and binders for their neat, timely and ungrudging of this book. We are delighted to express a deep sense of gratitude towards the contributors who did enthusiastically respond to our request for articles without any reminders from us. Finally, we are thankful to those who have helped directly or inderectly in organising the seminar as well as in the publication of this volume.

Shripad Bhat
Head of the Department

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M. A. Mehendale

I. Lokamanya Tilak and the Mahābhārata

Bharatacharya C. V. Vaidya's views on the great epic found expression in his book "Mahābhārata : A Criticism" which appeared early in 1905. With a view to reviewing this book, Tilak wrote the same year eight editorials in his journal "Kesari". These editorials appeared in March (14), April (11, 18, 25) and May (2, 16, 23, 30)[1]. While writing this review Tilak considered the Mahābhārata (Mbh). from three points of view : (1) Mbh : an *ārṣa* Mahākāvya, (2) Form and period of the MBh, and (3) Cultural importance of the Mbh.

(1) Mbh. as an Ārṣa Mahākāvya :

Mbh. is usually designated as a Mahākāvya in Sanskrit Literature. Works like Kālidāsa's Raghuvaṁśa, Bhāravi's Kirātārjunīya are also looked upon as Mahākāvyas. In order to distinguish both the Rāmāyaṇa and the Mbh. from the works of authors like Kālidāsa, Bhāravi and others, Tilak choses to style the Mbh. and the Rāmāyaṇa as *ārṣa* Mahākāvyas,[2] since they have been composed by ṛṣis like Vyāsa and Vālmīki, Tilak then gives his definition in five stanzas of an ārṣa Mahākāvya with

the help of expressions mostly picked up from different places in the Mbh.[3] In that definition it is said that an ārṣa Mahākāvya is *anekasamayānvita*[4]. Tilak understands this expression to mean that a poem like the Mbh. is full of many (difficult) situations and through them the epic demonstrates how different characters react in such situations. However, the meaning '(difficult) situation' is most unlikely for the word *samaya*. True, *samaya* conveys this meaning in old Marāṭhi kāvyas[5], but not in Sanskrit. The word *samaya* in Sanskrit means 'coming together, coming to mutual understanding, contract, treaty, etc.' And Mbh. is certainly full of such mutual understandings and contracts and hence the term *anekasamayānvita* occurring in the Mbh. to characterise the epic is quite suitable. As examples, one may cite the contract entered into by the Kauravas on one side and Pāṇḍava-Somakas on the other before the start of the war. This contract was related to the conduct of the war (Mbh. 6-1.26-33), or the mutual understanding entered into by the Pāṇḍavas regarding their relationship with Draupadī (1.204.27-30, 1-205.1)[6], and many more such examples.

(2) Form and Date :

It is usually believed that according to the tradition recorded in the Mbh. the epic had three authors viz. Vyāsa, Vaiśampāyana and Sūta Ugraśravas and that it bore three names Jaya, Bhārata and the Mahābhārata corresponding to the text in the hands of the three authors. Vaidya held the same view. As regards the number of stanzas in these three editions

of the work nothing is mentioned in the epic about the extent of Jaya of Vyāsa. According to Vaidya Vaiśampāyana's Bhārata contained 24,000 stanzas and Sauti's Mahābhārata one lakh stanzas.

Tilak, in general, agrees with the above view of Vaidya but differs from him in certain respects. Tilak agrees that there were three authors of the Mbh., but according to him, the epic was enlarged to contain one lakh stanzas not at the time of Sūta Ugraśravas; that form the epic had already assumed in the hands of Vaiśampāyana.[7]

Tilak is right when he disagrees with Vaidya in looking upon Jaya as the name of the Mbh. He holds the view that the Mbh. had only two names Bhārata and Mahābhārata. The text of the Bhārata was composed by Vyāsa, and with the addition of *ākhyānas* and other matter of varied nature it became the Mahābhārata of one lakh stanzas. Tilak, however, does not give reason why he does not look upon Jaya as the name of the Mbh. ("Samagra Lokamanya Tilak", Vol. 5, p. 716) in face of the statement जयो नामेतिहासोऽयम् found in the Mbh. (1.56.19).

That reason is given by V. S. Sukthankar in his edition the Ādiparvan (p. 989, note on stanza 56.19). He points out that in the Udyogaparvan, the Mbh. States that the *ākhyāna* called the Viduraputrānuśāsana (5.131-34) is also called Jaya (5.134.17) Hence according to Sukthankar Jaya is not the proper name of any particular text, but a *generic* name applicable to different works (possibly a kind of *itihāsa* in which some one is encouraged to take up arms against his enemy).

Having dealt with the problems regarding the authors and the names of the Mbh. and its extent,Tilak turns to the next point viz., the date of the Mbh. This question has to be discussed from two points of view : the date of the battle and the date of the composition of the present text. As regards the date of the battle, in the first instance, Vaidya and Tilak both agree in disregarding the view held by some western scholars that the Kauravas and Pāṇḍavas were not historical persons but were the symbols of vice and virtue. However, Vaidya could not refute the western view very convincingly. This is done by Tilak. Westerners pointed out that the Ait. Br. (8.21) and the Śat. Br. (13.5.4.1-2) mention the Aśvamedha sacrifices performed by Janamejaya, the son of Parīkṣit. Arjuna was the great grand-father of Janamejaya. His elder brother Yudhiṣṭhira, according to the Mbh., did perform an Aśvamedha sacrifice. Since the above Brāhmaṇa texts to not mention Yudhiṣṭhira and his Aśvamedha, he and his Pāṇḍava brothers, according to them, did not exist at all. Tilak points out that it was wrong on the part of the scholars who subscribed to the above view to identify Janamejaya of the Brāhmaṇa texts with the Janamejaya, the son of Parīkṣit. According to the geneology of the Pāṇḍavas given in the Mbh. at two places (1.89.44-45, 47-49; 1.90.43-44), among the ancestors of the Pāṇḍavas two kings bore the names Parīkṣit and Janamejaya, the father and the son. The Brāhmaṇa texts allude to these ancestors of the Pāṇḍavas and not to the later Parīkṣit and Janamejaya. This means that the Pāṇḍavas were not

even born at the time of the Brāhmaṇa texts. Then how could they refer to the Aśvamedha performed by Yudhiṣṭhiṛa?

As regards the date of the battle, Vaidya held the view that it took place in 3101 B.C. since it is said in the Mbh. the battle was fought at the time of the conjunction of the Dvāpara and the Kali age (1.2.9; 9.58.21). Tilak does not agree with this view. After discussing much astronomical evidence, he endorses the Purāṇa view that the Kali age began in the 15th cent. B.C. and not in 3101 B.C. According to him the Purāṇa view is in conformity with the geneaologies of certain dynasties given by them. Hence the date of the Mbh. battle cannot be pushed back beyond the 15th cent. B.C. However, Tilak is willing to modify his view to some extent if new evidence came to light. According to the archeaological evidence now available[8] the date of the battle is placed in the 12th cent. B.C., a date which is not very far from Tilak's view.

As regards the date of he composition of the text, Tilak agrees with Vaidya that the present text of the epic of roughly one lakh stanzas was known at the time of Alexander, i.e. 4th cent. B. C. Mbh. makes no mention of *rāśis* and of the days of a week. Similarly it does not include Gautama Buddha among the incarnations of Viṣṇu. On the other hand it states that when Viśvāmitra created counter-creation he started th *nakṣatras* with Śravaṇa (1.64.34)[9]. Such facts point to a period not earlier than four to five hundred years before Christ. However, the original

composition assumed its present form due to additions of various kinds by about the second or the third century B.C. and not later than that. Thus, in this respect, Tilak agrees with the view earlier expressed by Vaidya (Vol. 5, pp. 717-718). The present consensus puts the date of the Mbh., starting from its first composition to its assuming the present form, between 4th cent. B.C. and 4th cent. A.D.[10]

(3) National and Cultural Importance of the Mbh. :

As regards the national and cultural importance of the Mbh., Tilak stresses the fact that epics like the Rāmāyaṇa and the Mahābhārata have played a significant role in moulding the character and the behaviour of the people of the whole nation. The two texts brought about a sense of unity in the diversity of various forms of the Hindu religion. It is generally said that Indians got a new sense of being 'one nation' only after the establishmenf of the British empire. According to Tilak, this view is only politically true to some extent. But he immediately points out that had it not been for the background of the sense of cultural unity created by the epics among the peoples of India, it is doubtful whether the British empire could have given the new sense of being one political unity so easily. Finally, Tilak points out the importance of the close relationship of Kṛṣṇa with the story of the Pāṇḍavas. In fact he feels that the Mbh. war is a part of the life of Kṛṣṇa. Cooperation between Kṛṣṇa and the Pāṇḍavas means the cooperation between morality and skillful behavour (*yukti*) on the one hand and the strength of arms (*śakti*) on the other[11]. This

cooperation is necessary for the stability and the cultural prosperity of any nation. This, according to him, is the lesson of the Mbh.

Tilak had quite early realized the ncecessity of publishing a critical edition of the Mbh. based on the various recensions of the epic in different parts of India. He had hoped that C. V. Vaidya would undertake the task and accomplish it. But that was not to be. As is well known, the 'Bhandarkar Oriental Research Institute has fulfilled in 1966 the hope entertained by Tilak some sixty years ago.

II Lokmanya Tilak and the Avesta

Tilak wrote his famous two books : (1) The Orion or Researches into the Antiquity of the Vedas in 1893, and (2) The Arctic Home in the Vedas in 1903.

(1) The Orion

Tilak was led to write his first book by a stanza in the Bhagavadgītā 10.35. The second line in the stanza reads as मासानां मार्गशीर्षोऽहम् ऋतूनां कुसुमाकरः. The question arises : Why does Bhagavān say that he is the month of मार्गशीर्ष among the twelve months of the year? Why is this special importance attached to that month in preference to the others? This question led Tilak to investigate the Vedic calendar which revealed to him that in the Vedic times the vernal equinox was in the asterism Orion or Mṛgaśiras which meant that in those days the year began with the month of Mārgaśīrṣa. This finding provided him with the explanation why the month of Mārgaśīrṣa was given preference by the Bhagavān in the Gītā.

The above finding also led Tilak to conclude that,

on astronomical grounds, the period of the Veda cannot be later than 4000 B.C. In support of his contention Tilak has drawn on much Vedic evidence and some evidence from the Avesta. In his preface to the book "The Orion...." on p. v. Tilak observes that although he has used astronomical method to arrive at his conclusion about the antiquity of the Vedas, on the whole his book is more literary than astronomical. He therefore, exhorts Sanskrit scholars first to study the Sanskrit passages discussed by him and decide whether his interpretations of those passages are correct or not. Today, I am not going to speak on the Vedic passages discussed by Tilak. What I am going to do is to examine the two pieces of Avestic evidence discussed by him, one each in his two books, and say whether his interpretations and conclusions are acceptable or not.

In chapter VI of his book The 'Orion' (pp. 129-156) Tilak deals with certain legends connected with the asterism Mṛgaśiras or the Oiron. The asterism, as its name indicates, represents the head (*śiras*) of Prajāpati who in the form of a deer (*mṛga*) wanted to violate his daughter. Rudra, as the hunter, cut off the head of the deer by shooting an arrow. This head now appears in sky in the form of the asterism. Tilak sees similarity between the above legend and the one which appears in Greem mythology. According to Greek mythology, Uṣas loved Orion. This was not approved by gods. They killed him and placed his head among the stars where it appeares with four adjuncts viz. a girdle, a sword, lion's skin and a club. Tilak feels that a trace of the Greek legend is

preserved in the Avesta, the ancient religious text of the Iranian zoroastrians. According to him it is found in yasna IX.26 of the Haoma Yašt.

Tilak's argument is as follows. Among the Vedic texts, the Taittirīya Saṁhitā 4.4.10 tells us that Soma is the presiding deity of the asterism Mṛgaśiras which means identity between the two. Since Vedic Soma and Avestan Haoma are the same, Avestan Haoma is also identical with the asterism Mṛgaśiras. Now in St. 26 of Yasna IX it is said that Ahura Mazdā brought for Haoma, i.e. for the asterism Mṛgaśiras an aiwyå̄ghana 'a girdle' which was decorated with stars (stdh. paesah) and was fashioned by Mainyu (mainyu. tāšta. According to Tilak, this aiwyå̄ghana or girdle of Haoma is the same as the belt of stars of the Orion mentioned in the Greek legend. Hence Tilak argues that a trace of the Greek legend is found in the Iranian literature.

It is difficult to accept Tilak's conclusion for the following teasons. Haoma in the Avesta does not figure as a star. As in the Veda, Avestan Haoma means a plant (growing on the mountain) or its juice. It is also a divinity receiving praise as in the Veda. Haoma, like the Orion's head, was not placed in the sky among the Stars. Unfortunately Tilak does not take into consideration the whole passage IX.26 but only those words which, he thinks, suit his argument. According to the Avestan passage, Haoma, when supplied with the aiwyå̄ghana sat on the tops of mountains (and not in the sky) reciting the holy *mantras* with their words in close combination and also separated by pauses. All this description has

nothing to do with the asterism Orion. The girdle brought for Haoma is said to be star-bedecked simply because the girdle meant for a divinity like Haoma had to be luminious and hence was omamented with stars or star-like precious stones. The word Stahrpaēsah 'star-bedecked'[12] has no relation with the three stars of Orion.

The purpose of IX. 26 is quite clear. It is intended to register Haoma's full integration in the Zoroastrian religion. Zarathushtra himself did not approve of the Haoma cult. It was introduced later into the Zoroastrian religion. In IXX.26 it is said that that Ahura Mazdā himself brought the girdle for Haoma, the girdle being the symbol of the good Māzdayasnī religion. When Haoma was equipped with this sacred girdle he became qualified to recite the holy *mantras.* It was like the investiture ceremony of a young Zorastrian with a sacred thread in order to admit him fully into the community.[13]

(2) The Arctic Home in the Vedas

In his second book "The Arctic Home in the Vedas" Tilak has a special chapter on "The Avestic evidence" (pp. 289-320).

Tilak held the view that the original home of the very ancient people who later came to be known as the speakers of the various Indo-European languages was in the Arctic region and that they migrated from there southwards, since their home was destroyed by snow and ice due to the advent of the last glacial period, to reach Centra Asia and from there to Iran and India. He says that the Vedas speak of long

dawns, long periods of continued darkness, sacrificial sessions lasting for ten months, all of which point to the Arctic zone as the home of the Vedas. But the Vedas have nothing to say about the original home being far in the north, nor do they mention why the people abondoned their home to seek a new one southwards.

This deficiency, according to Tilak, is made good by the first two chapters, called frakart of Vendidād of Avesta. The Vendidād as a whole has a nature of a priestly code. It deals with such topics as breaches of contract and punishments for them, various kinds of impurities and their purifications, etc. The first two chapters, however, stand apart as their subject is quite different from that of the rest of the book. They contain two legends which, according to Tilak, show that the Aryans once lived in a much colder country than in later times.

The first chapter of the Vendidād tells us that Ahura Mazdā created sixteen countries one after the other. As soon as he created a country, Aṅra Mainyu or the evil spirit opposed to Ahura Mazdā created different kinds of plagues like long winter, unseasonable heat, locusts serpents or other noxious animals, bad non-Aryan rulers, sorcerers etc. rending life in that country uncomfortable. The first country created by Ahura Mazdā was Airyana Vaējah. Aṅra Mainyu created a red serpent and winter of ten months and summer of only two months. The two summer months were also very cold. When the winter ended, there were large floods.[14]

The geological findings of recent times show that

the climate of circum polar region, which is now unsuitable for human habitation due to extreme cold, was mild and genial before the advent of the last glacial period. According to Tilak the very ancient forefathers of the later speakers of the Indo-European languages once lived there. His opinion is that the Airyana Vaējah mentioned in the first chapter of Vendidād as the first land created by Ahura Mazdā was the original home of the ancient forefathers of the Avestan Iranians. This land became unsuitable for habitation when Aṅra Mainyu spoiled it by producing extreme cold in long winters and floods. What is stated in the Vendidād is not a mythical or an imaginary account but it is a reminiscence of a very old historical event.

It is difficult to go along Tilak's line of argumentation because, in the first instance, there is no compelling ground to locate Airyana Vaējah as far in the north as the Arctic zone. We have to remember that the boundaries of ancient Iran were far distant than they are at present. They included the whole of Afghanistan and southern regions of the once Soviet Union. Some parts of this larger Iran could be colder than the rest of Iran. On linguistic grounds Airyana Vaējah is identified with Chorasmia in eastern Iran. or with the high lands of Afghanistan. Zarathushtra had to migrate from Persia to Chorasmia to seek royal patronage which he found with king Vistāspa. It is from there that he propogated his religion. It is, therefore, quite natural Airyana Vaējah was declared to be the first land created by Ahura Mazdā. Airyana Vaējah literally means the 'land of Aryans' The

etymology of the word *Vaējah* 'land, country' is not clear. But the meaning 'seed, germ' given to it by some scholars and accepted by Tilak (p. 295) is, according to Bartholomae wrong. It was based on wrong identification of the word with the later Persian word bīj 'Seed, semen'[15].

Tilak relies on two pieces of evidence to locate Airyana Vaējah in the arctic zone. One is the statement that Aṅra Mainyu created in that land a long winter of ten months and a summer of only two months and that kind of climatic condition is possible only in the arctic regions. He also concludes on the basis of this statement that the first chapter of the Vendidād was composed when that region was an ice-bound land. If Tilak, thereby, wishes to suggest that the Vendidād was composed at a time when the Airyana Vaējah first experienced its long winter of ten months then that conclusion can hardly be accepted. It is agreed on all hands that the Vendidād represents the later strata of the Avesta which was written a few centuries after the death of Zarathushtra. In that case the date of the Vendidād could not be earlier than, say, 8th cent. B. C. (accepting Zarathushtra's date to be 1000 B.C.). The statement in the Vendidād about the long winter can be understood as prompted by the desire of the writer to stress the severeness of the calamity created by Aṅra Mainyu.

The other piece of evidence is in the form of statement in the Vendidād 2.40 that in the enclosure (*var*) erected by Yima the sun, the moon and the stars rose only once a year and that a year seemed only as

a day (Tilak p. 308 ff). According to Tilak this description unmistakably fixes the position of this *var* in the region round about the North Pole. What we have to remember here is that this is not the description of the whole of Yima's Kingdom (apparently identical with the Airyan Vaējah) but only of the *var* of mud erected by him to save himself and what he preserved with him from the flood. This *var* was obviously too high not to allow the flood water to enter into it, nor anything related to Aṅra Mainyu. And when Zarthusthtra wondered what kind of lights lighted this *var*, Ahura Mazdā told him that the people saw the sunrise only once a year. This is thus the speciality of the *var* and not of the whole of Yima's Kingdom, where he ruled before the floods and where he was expected to rule again after the disappearance of the floods. Hence this speciality of the *var* which was experienced by the people only as long as they were enclosed in the *var* cannot be taken advantage of to locate the whole of Airyana Vaējah in the Arctic Zone.

Secondly, there is no mention in this section of the Vendidād of migrations of the people from one land to another when the life in the previous one was disturbed by plagues created by Aṅra Mainyu. Tilak has not missed this difficulty (p.315). Still he assumes migrations because that is so essential for his theory. To carry Tilak's argument to its logical condusion one will have to answer the question where did the people go from the sixteenth, and, the last land created by Ahura Mazdā, when living conditions there were disturbed Aṅra Mainyu by creating Daevic winters

and the non-Aryan bad rulers. If the people of the sixteenth land did not go anywhere else but lived in their own land to overcome the menaces created by Aṅra Mainyu, so did the people who lived in the first fifteen lands and did not migrate each time to the next happy land created by Ahura Mazdā.

The only thing we come to know from the first chapter of Vendidād is the geographical knowledge of the Iranians in the days Zarathushtra. (pp 295-296). Apparently they had no exact knowledge of any land beyond the sixteenth situated on Raṅhā, although they vaguely believed that there were other beautiful, wonderful, estimable, shining and suitable lands, though not created by Ahura Mazdā (Vendidād 1.20).

The second chapter of the Vendidād according to Tilak, supplies some information missing in the above account of the first chapter. The first chapter speaks of the severe cold and floods created by Aṅra Mainyu that overran the Airyana Vaējah, but does not tell us how the people living there were saved at the time of the rising floods. This information is given in the second chapter of the Vendidād in the form of a legend of Yima in two parts. The first part (1-20) describes the happy kingdom of Yima. He made the subjects thrive and kept cold, heat, death and diseases away[16]. He enlarged the earth three times in order to make room for the people and the animals of all sorts. The second part of the legend (21-43) tells us that Yima was warned by Ahura Mazdā of an approaching dire winter and that the high floods due to the melting of the snow would destroy every living creature. Yima was advised to build a *var* 'an

enclosure' of earth and preserve in it the representatives of all kinds of men and women, animals and plants, foods etc. Nothing related to Aṅra Mainyu would be able to get into the *var* of Yima to destroy all that was preserved by him. Yima did everything as was told to him and was able to save the representatives of all kinds, Although it is not directly stated it is clear that whatever Yima had preserved was meant to start life again in the Airyana Vaējah once the floods receded.

Tilak points out that this legend of Yima in the Avesta is easily comparable with the legend of the deluge found in the Śat. Br. 1.8.1.1-10. In that legend a fish warned Manu of a destructive flood and advised him to build a ship and get into it when the flood would rise. The fish helped him to reach the mountain (Himavant) in the north. He fastened the ship to a tree. Manu was to sit in the ship and descend gradually with the receding waters of the flood.

The similarity between the two legends is remarkable, no doubt, although the way in which the principal characters saved themselves are different in the two legends.[17] The principal character of the Indian legend, Manu, is the son of Vivasvant, and the principal character of the Iranian legend, Yima, is also the son of Vīvaṅhavant.

Tilak has sought the help of the Yima legend in order to get information which was not found in the first chapter of the Vendidād. Next, he points out its similarity with Indian legend in order to point out that the origin of the legend must be very old. But he has obiviously failed to draw the conclusion from this

similarity between the Iranian and the Indian legends tht just as in the Indian legend Manu did not migrate to any other land when the flood receded but lived in th same country as before, Yima of the Iranian legend, too, must not have migrated to any other land once the catastrophe was over. He continued life again with the help of the representatived saved by him, in the same land where he once lived.

Tilak's theory to push back the antiquities of the Vedas to a period when the vernal equinox was in the Mṛgaśiras or Orion and about the original home of the Aryans being in the Arctic zone has to stand on its own strength of the Vedic evidence cited by him and his astronomical calculations. That conclusion will be independent of the Avesta. What I have tried to show so far is that Avesta does not offer any evidence to support his theory.

Footnotes

1. All these are reprinted in "Samagra Lokamānya Ṭiḷak" Vol. 5, 706-753 Kesari Prakaśhan, Pune, 1976.
2. Mbh. itself calls it as *ārṣa* 1.1.207.
3. For the definition see "Samagra Lokamānya Ṭiḷaka" Vol. 5 p. 721.
4. Mbh. 1.2.30
5. cf Moropant, "āryābhārata", Bhīṣmaparvan 11.58.
6. The word *samaya* occurs at both these places.
7. If tradition is to be believed not Vaiśampāyana but Vyāsa himself composed the epic of one lakh stanzas.

   इदं शतसहस्रं हि श्लोकानां पुण्यकर्मणाम् ।
   सत्यवत्यात्मजेनेह व्याख्यातममितौजसा ॥ 1.56.13

   According to an interpolated passage in the Ādiparvan no. *30, however, the form of one lakh stanzas was given

by Vaiśampāyana (or Sauti?). The passage runs as
अस्मिंस्तु मानुषे लोके वैशंपायन उक्तवान् ।...
... एकं शतसहस्रं तु मयोक्तं वै निबोधत ॥

8. See M. R. Yardi : The Mahābhārata : the Genesis and Growth, Pune, 1986, pp. 138-155.
9. According to Tilak's calculations the *nakṣatras* began with Śravaṇa in 450 B.C.
10. Thus, e.g., M. Winternitz : A History of Indian Literature, Vol. I pp. 474-475.
11. cf. the end stanza of the Gītā.
यत्र योगेश्वरः कृष्णो यत्र पार्थो धनुर्धरः ।
तत्र श्रीर्विजयो भूतिर्ध्रुवानीतिर्मतिर्मम ॥ 18.78
12. In Avesta this adjective is also used for vāsha, 'the chariot' of Mithra (Yasht 10.143) *nmāna* 'the house' of Sraosha (yasne 57.21), vaṅhana 'the garment' (=sky) of Ahura Mazdā and haoma 'Some plants' (pl) placed by Mithra on the Haraiti mountain. In most cases *star* is taken to mean not literally *'star'* but a 'precious stone'.
13. I refrain form disarming Tilak's far fetched suggestion to identify (1) sk. āgrayaṇa with Gk. Orion, (2) Sk. Ahir Budhnya with Av. Ahura Mazdā, and (3) Sk. Aryaman with Av. Ahriman, since they have no direct bearing on the topic of this talk.
14. In this way we find in the first chapter an enumeration of sixteen lands (of which the land *hapta hindu* or *Sapta sindhu* was, the fifteenth.)
15. Cf. Bartholomae, Iranisches Woerterbüch (1904) col. 1313-1314.
16. This description of Yima's kingdom is comparable with the description of Yama's *Sabhā* given by Nārada to Yudhiṣṭhira in the Sabhāparvan of the Mahābhārata
नैवातिशीता नात्युष्णा मनसश्च प्रहर्षिणी ।
न शोको न जरा तस्यां क्षुत्पिपासे न चाप्रियम् ॥ (2.8.3-4)
17. Also Manu had nothing else in the ship to start life again. He did it by performing a sacrifice.

Section 1

The Orion and the Problem of Chronology of Vedic Literature

B. G. Tilak and Ancient Indian Astronomy : A Reappraisal

K. D. Abhyankar

I. Introduction

B. G. Tilak wrote three books on ancient Indian astronomy. They are 'The Orion' in 1893, Note on the interpretation of Vedāṅga 'Jyotiṣa' in 1914, and 'The Arctic Home of the Vedas' in 1925. Along with S. B. Dixit's Bhāratīya Jyotiṣa Śāstrācā Itihās' published in 1934, they form the starting point of the author's researches in this field. This paper gives a summary of the results that have a bearing on Tilak's original works.

II. Vedic Chronology

Tilak's first book 'The Orion' deals with Vedic chronology. He has divided the Vedic period into four parts, viz. Aditi period, Orion period, Kṛttikā period and Vedāṅga Jyotiṣa period. Tilak believed that there were two year beginnings. According to him sacrificial year began at winter solstice (22 Dec. in Gregorian calender) and civil year began at Vernal equinox (21st March). That is why he has named the first three periods according to the solar nakṣatra at vernal equinox, viz. Punarvasu (Aditi), Mṛgaśīrṣa (Orion) and Kṛttikā. But Vedāṅga Jyotiṣa Calender begins with winter solstice. So also the Gavāmayanam sacrifice, which served as a calender in the earliest times, started at winter solstice. We believe that this has the

practice throughout the Vedic period. So we define the periods on the basis of the shift of winter solstice among the solar nakṣatras by about one nakṣatra in 950 years due to the phenomenon of ayanacalana (precession of equinoxes). We have divided the (1, 2) whole Vedic period into 7 Eras instead of Tilak's 4 periods. The first three Eras make use of Ṛtusaṁvatsara i.e. the year of seasons. They are disucssed in section III.

The later four Eras are based on Lunar-Solar calenders. They are discussed in Section IV.

In this paper we will denote Śukla Pratipadā to Pourṇimā by S_1 to S_{15} and Kṛṣṇa pratipadā to Amāvāsyā by K_1 to K_{14} and K30, respectively.

III. Ṛtusaṁvtsara Eras

1. Aśvini- Puṣya Era :-

We have shown (3, 4) that in the earliest Vedic calender the year started at winter solstice heralded by the heliacal rising of Aśvini nakṣatra around 7000 B.C. that is why prātaryāvāṇā Aśvinikumāras, the deities of Aśvini nakṣatra, are said to come to sacrifice at dawn and rejuvinate the Sun after winter solstice, It was a Ṛtusaṁvatsara, i.e. year of seasons, controlled by Gavāmayanam sacrifice of 360 days divided into two satras : Uttarāyaṇa (22 dec to 21 June) and Dakṣināyaṇa (22 June to 21 Dec). Each satra consisted of 6 months of 30 days each and each month was further divided into 5 ṣaḷahas of 6 days each. This division was suggested by observation that a lunar month contains roughly 30 days and a year contains roughly 12 lunar months.

Gavāmayanam was followed by 5 days of Pravargya and Upasad (Dīkṣā) ceremonies to complete the year of seasons before starting the next Gavāmayanam sacrifice. Recitation of Aśvini śastra during Pravargya ceremony again points to the heliacon rising of Aśvini nakṣatra At a some what later time Śunaḥśyepa legend indicates that Rohita introduce the six year yuga in which 6 Gavāmayanam sacrifieces of 360 days were followed by an adhikamāsa of 30 days. We call this Aśvini-puṣya Era during which the year began on Siddhāntika Vaiśākha s_1 and the Sun would have been in Puṣya nakṣatra at vernal equinox.

2. Revati-Punarvasu (Aditi) Era :-

The next stage occurred around 6000 B.C. when the writer solstice coincided with Caitri Pūrṇimā with the Sun in Revati nakṣatra. That was the time when Chaitra Pūrṇima became the mouth (Mukha) of the year. This prompted the priests to observe and identify the 28 nakṣatras on the path of the Moon, known as Varuṇa's path i.e. the ecliptic. Further, performance of Darśa and Pūrṇamāsa Iṣṭis on the new moon and full days showed that the lunar month contains roughly 29.1/2 days. So Gavāmayanam sacrifice was replaced by utsarjināmayanam sacrifice of Taittirīya Saṁhitā. It consisted of 12 lunar months covering 354 days. This was acheived by deleting the last day of certain ṣaḷahas as utsarjit days. This sacrifice was followed by 11 atirātra days to complete the year of seasons. That is why they are called the children of the seasons. It was not this time when the concepts of Devayāna (the northern half of the

ecliptic) and Yamayāna or Pitṛyāṇa (the southern half of the ecliptic) came into vogue. As Devayāna started with Sun in Punarvasu nakṣatra at vernal equinox. Aditi, the mother of Gods, was made the deity of Punarvasu nakṣatra. That is why Tilak called it Aditi period as he gave more importance to vernal equinox than winter solstice.

3. Agastya - Rāmāyaṇa Era :-

After another 1000 years i.e. by 5000 B.C. the winter solstice would have shifted to Uttarā Bhādrapadā nakṣatra and vernal equinox to Ārdrā. At that time the year would have started on Caitra s_1. We have called this Agastya Rāmāyaṇa Era due to following reason (5). Agastya is the star Canopus in the southern hemisphere only 14 degrees away from the ecliptic pole. So its declination varies between 52^0 and 80^0 south. due to the phenomenon of precession of equinoxes. Assuming that for the star to be visible for some length of time it has to come at least 5^0 above the horizon. Calculations show that Canopus was not visible from any part of India before 10000 B.C. and this will be the case again after 11800 A.D. It was visible only in the region south of the Vindhyas before 5200 B.C. and would do so again after 7400 A.D. We conjecture that it was around 5000 B.C. when according to legend Vindhya mountain prostrated before his guru Agastya, i.e. Agastya crossed that mountain and saw the star named after him. Agastya is said to have given the gift of Tamil language and Cauvery river, which means he discovered the ancient Tamil civilization in the

Cauvery Basin, which is conteporary with the Sanskrit civilization of Indo-Gangetic plain. In other words, he was the first national integrater who fused the two ancient civilizations into the mighty Hindu civilization. As Agastya is conteporary of Rāma this time of 5000 B.C. would also be the time of Rāmāyaṇa. At that time the year beginning on Caitra S_1 could come into vogue. However it respresented winter solstice and not the vernal equinox of 285 A.D. used in Siddhāntika period. Not realising this some Siddhāntika Astronomers put forward the theory of trepidation in which the vernal equinox oscillates around Aśvini nakṣatra by 27° in a half period of 3400 years. Actually both winter solstice and vernal equinox rotate continuously backward completing one round in 26000 years due to the phenomenon of ayanacalana i.e. the precession of the earth's poles around he ecliptic poles. During this period there was confusion between the solar and lunar calenders as the tithi of the year beginning changed from year to year.

IV. Luni-Solar Calenders

We shall now deal with the later period during which there evolved luni-solar calenders which ultimately led to the development of the Siddhāntika Pañcāṅga (6).

4. Pūrvā Bhādrapadā-Mṛgaśīrṣa (Orion) Era :-

We now come to the orion period the Tilak when the vernal equinox was in Mṛgaśīrṣa and the winter solstice was in Pūrvā Bhādrapadā nakṣatra, around 4000 B.C. It was the time when the year beginning

was shifted to Phālgunī Pūrṇimā (Phālgunī s_{15}), according to the statements like Phālguna full moon is the mouth of the year, and this Phālgunī full moon is the first night of saṁvatsara'.

At this time 11 atirātra days were replaced by 12 atirātra days by Ṛbhus so that one could have two adhikamāsa in 5 years. It also insured that the year would begin on a fixed tithi, Śukla Pratipadā (s_1) or Kṛṣṇa Pratipada (K_1). An Adhikamāsa was introduced at the end of the 3rd and 5th year, it was called Saṅsarpa. At a somewhat later time the adhikmāsa was introduced after every 30 months, as in Vedāṅga Jyotiṣa. The one before summer solstice in the 3rd year was called Malimluc and the one at the end of the 5th year before winter solstice was called saṁsarpa as before. At this time Mārgaśīrṣa month occured in Śaradṛtu. As the full moons (māsas) of Śaradṛtu are most beautiful it was started that Mārgaśīrṣa māsa is the best among all māsas.

The above change gave rise to the 5- year yuga system which replaced the earlier 6- year yuga system. However it was realised that this procedure introduced 15 extra tithis in 15 years. So it was decided to drop one pakṣa as Kṣaya pakṣa after 15 years giving rise to the Dākṣāyāṇīya sacrificial calender of 30 years described in Śatapatha Brāhamaṇa. In this calender the months were amānta in the first 15 years and paurṇimānta in the next 15 years. After some time it was found more convenient to drop & whole month after 30 years as Kṣaya month thus having 11 adhikamāsas in 30 years. The

dropped month was called Aṁhaspati. Introduction of Kṣaya month was decided by observing the solar nakṣatra after the Saṁsarpa month at the end of every five years as described in the next setion.

5. Mahāśivarātri- Rohiṇi Era :-

Around 3000. the winter solstice has shifted to Śatabhiṣag nakṣatra and vernal equinox to Rohiṇi, So the year was started on Phālguna s_1. At this time Kṛttikās rose exactly in the east. We have shown (7) that before Vedāṅga Jyotiṣa there were 28 nakṣatras in which present Śrāvaṇa (Aquila) was called Abhijit and present Dhaniṣṭhā (Delphinus) was called Śroṇa (it resembles ear) or Śraviṣṭha. Also Beta Aquaria was Dhaniṣṭhā and Fomalhant (Parsi Śatavaheśa) was Śatabhiṣag Mahāśivaratri festival was introduced at this time to decide when to convert adhikamāsa into Kṣayamāsa (8). Let us see how Śivarātri occurs at the end of every lunar month. Its astronomical significance is that we have the last appearance of the Moon at the end of Śivarātri in the dawn of κ_{14} as it rises before Sunrise. This day's Sun represents Śiva with the crescent Moon on its head, hence the name Śivarātri. The moon reappears again on s_2 after sunset in the west. Now if we observe the nakṣatra or the Moon on these two days it is obvious that, the intermediate nakṣatra would be the solar nakṣatra as nakṣatras are not visible in the day.

Once we know the significance of ordinary Śivarātri it becomes clear that Mahāśivarātri would be the longest Śivarātri of winter solstice. At present Mahāśivarātri occurs on February 26 on an everage.

In those days it would have occurred on December 22. This shift of 66 days give an era around. 2750 BC which coincides with the Indus valley civilization. The Mahāśivarātri festival would have been introduced in that epoch for determining the solar nakṣatra after Saṁsarpa adhikamāsa. If it came out to be Śatabhiṣag then one would convert the adhikamāsa into a Kṣayamāsa that is why we have called this Mahāśivarātri - Rohiṇi Era as Rohiṇi was the solar nakṣatra at vernal equinox.

The nakṣatras of the four cardinal points of this period are depicted on Mohenjodaro seal M420. The central figure of this seal is the Prajāpati(3) Brahmā and it is surrounded by four animals representing four Zodiacal constellations. They are : Vernal equinox at Rohiṇi in Vṛṣabha represented by He Buffalo instead of bull- summer solstise at Delta Leo in Siṁha represented by a tiger instead of lion; atumnal equinox at Jyeṣṭha in Vṛścika (Tilak's Vṛṣākapi) represented by elephant as it looks like Gaṇeśa with elephant trunk; and winter solstice at Śatabhiṣag represented by one horned Rhino for the single bright star Fomalhaut.

6. Maghā-Kṛttikā Era :-

We then come to the next period around 2300 BC when the Vernal equinox was in Kṛttikā and winter solstice concided with Māgha Pūrṇimā (Māgha s_{15}) this was the period during which the list of 28 nakṣatras was started from Kṛttikā, and Kṛttikā to Swāti formed devayāna while Viśākhā to Bharaṇi formed Yamayāna.

7. Vedāṅga Jyotiṣa Era :-

Finally we come to Vedāṅga Jyotiṣa period of 1400 BC when the year started on Maghā s_1 with winter solstice marked by the Sun in present Dhaniṣṭhā, and Vernal equinox Sun in Bharaṇī. We shall discuss the Vedāṅga Jyotiṣa Calender in detail in the next section.

Vedāṅga Jyotiṣa type calender was used by the Jain Astronomers of 500 BC when winter solstice had shifted to present Śrāvaṇa. There was a break in tradition after this due to Babylonian and Greek influence. The most marked difference was he replacement of winter solstice by the fixed vernal equinox of 285 AD as the beginning of the year. This made the calender sidereal i.e. nakṣatra based instead of season based so it is being divorced from seasons by about 1 day in 72 years. And now after 1700 years the year does not begin on vernal equinox day but 24 days later.

The following table shows our Vedic Chronology at a glance.

Vedic Chronology

IV. Vedāṅga Jyotiṣa Calender

We now discuss the question of correcting the Vedāṅga Jyotiṣa Calender raised by Tilak in the second book. We show that the solution is pronded in the text of Vedāṅga Jyotiṣa itself (10).

Vedāṅga Jyotiṣa was formulated by sage Lagadha when winter solstice position of the Sun was in Dhaniṣṭhā nakṣatra (Beta Delphine) around 1400 BC. It replaced the earlier basically observational

procedure of making calender by a mathematical device which is apperantly the first and oldest scheme of its kind in the world. It involves the use of round numbers for describing the positions and motions of the Sun and Moon in the first approximation and gives rules for correcting them for better accuracy. The most authentic and exhaustic exposition of. Vedāṅga Jyotiṣa is that of Kuppanna Shastry.

1. Nominal Calender :-

According to Yajurjyotiṣa verses 28 to 31 one yuga contains 5 years, each containing 366 days 6 ṛtus, 2 ayanas and 1 solar month of 30.1/2 days. Further the yuga contains 1830 sāvana (civil) days, 1835 sidereal days, 1768 moon rises, 1809 lunar nakṣatras, 135 solar nakṣatras, 134 ayanas of the Moon corresponding to 67 sidereal lunar months, 124 parvas, 61 sāvana months of 30 days each and 62 synodic lunar months containing 1860 tithis. As there are 1860 tithis and 1830 days one has to drop 30 tithis as kṣaya tithis in one yuga.

These specifications were used for defining the units of angle and time. Each nakṣatra was divided into 124 Bhaṁśas so that the whole circle contained 27x124=3348 Bhaṁśas. As the Sun covers this angular distance in 372 tithis, it moves through 9 Bhaṁśas in one tithi. For the Moon's motion the day is divided into 603 kalās so that the Moon requires 610 kalās to move through one nakṣatra. the day is also divided into 30 muhūrtas like 30 tithis in a month and also in 124 divasāṁśas like 124 parvas in a yuga. The division in divasāṁśas is useful in deciding the

position of kṣaya tithis.

It is normally started that one drops a tithi after every 61 tithis. But Vedāṅga Jyotiṣa presecribes a different method of dropping a tithi by making some months end on 29th day by reducing one ṣaḷaha of the month from 6 to 5 days. Kuppanna Shastry has referred to yajurjyotiṣa verse 12 which requires that a parva tithi (pūrṇimā or amāvāsyā) is to be dropped is the parva lasts for less than one pāda (31 divasāṁśas) of a day i.e. It ends before noon. And in that case the Darśa or Pūrṇamāsa iṣṭi is to be performed on the next pratipadā on applying this rule we find that one has to drop 14 amāvāsyā and 16 pūrṇimās making a total of 30 kṣaya tithis as required.

2. Defects and corrections :-

The nominal definition of 5- year yuga involves two approximations made for easy calculation. (i) 62 Synodic lunar months contain close to 1831 days and not 1830; (ii) 1860 tithis in 5 years amount to 372 tithis per year. But actually there are close to 371 tithis in one year. So we have 5 extra tithis in one yuga. We have shown that Lagadha has provided rules for correcting these defects (iii) without which the whole scheme would become useless in a short period of time. The required corrections are prescribed in Ṛgjyotiṣa verse 12 which is the same as yajrujyotiṣa verse 27. It runs as follows :

त्र्यंशो भशेषो दिवसांशभागांश्चतुर्दश्याष्यनीयभिन्नम् ।
भार्धेधिके चापिगते परोंश्यो द्वावुत्तमे नवकैरवैधम् ॥

This verse is not properly interpreted by most expositors including Kuppana Shastry. According to us, the first half states that a difference of 1/3

bhāṁśas in angle and 1 divasāṅśas in time arises at each caturdaśī. Here caturdaśī is figuratively taken as the end of the parva, because pūrṇimās and amāvāsyās might be kṣaya tithis occasionally. As there are 124 parvas in a yuga we get a total of 124 divasāṁśas or one day during the yuga as required. Further on applying the rule of yajurjyotiṣa verse 12 as before we find that we have to drop 15 amāvāsyās and 14 pūrṇimās as kṣaya tithis. The total dropped tithis now become 29 which makes 1860 tithis in 1831 days as requried.

The second half of the verse specifies that in the case of navakas, i.e: bhāṁśas, $^1/_3$ bhāṁśas also arises at 10 bhārdhas i.e. ayanas and at the end of the yuga. so the total difference in a yuga becomes $^1/_3$ (124 * 10 * 1) = 1/3x135=45 bhāṁśas . So is the Sun starts at O bhāṁśas of Dhaniṣṭhā at the beginning of the first yug, it will be at 45 bhāṁśas of Dhaniṣṭhā at the beginning of the second yuga, 90 bhāṁśas of Dhaniṣṭhā at the beginning of the third yuga and 135-124=11 bhāṁśas of Śatabhiṣag at the beginning of the 4th yugā. Now 135 bhāṁśas is the distance travelled by the Sun in one pakṣa of 15 tithis. So the Sun should have arrived at the starting point one pakṣa before the end of the 15 th year.

So one has to drop one pakṣa of the adhikamāsa at the end of 15th year as a kṣaya pakṣa. And this has to be repeated after every 15 years. In other words, we have to modify the 5- years yuga calender and convert it into the 30- year Dākṣāyaṇīya sacrificial calender discussed earlier; It may be

mentioned here that it was found that three Dākṣāyaṇīya sacrificial cycles fell short of 90 years by about 5 days as the year contains close to 371.05 tithis instead of 371 tithis. So it was decided to add one normal 5- year yuga of 1831 days after the third cycle to bring the calender into unison with the seasons. This is the basis of the 95 year Agnicayana vidhi of Śatapatha Brāhmaṇa.

VI. Original Home of the Vedic people

Tilak's third book takes recourse to the hypothesis of Aryan influx into India from outside on the basis of affenities between Indian and European Languages. Tilak places their original home in the Arctic region. While there is no mention of an original home of the Vedic people in the Vedic literature new archeological, tectonic and linguistic investigations as well as satellite imaginary would make India itself their original home. We find that a proper understanding of the earliest Vedic calender, which fits with the Indian monsoon climate, supports this conclusion.

1. Seasons :-

The Aśvini calender had three seasons of four months each starting from winter. Winter solstice : Agni Ṛtu, Sūrya Ṛtu, and Candramā Ṛtu. The first Agni Ṛtu covered roughly the period from 22 December to 21 April. As it coincided with the cold season (Śiśira and Vasanta of later period) in northwest India. When one needs Agni (representative of Indra on earth) for comfort it is called Agni Ṛtu. The next four months covering

roughly 22 April to 21 August in Gregorian calender is called Sūrya Ṛtu. This is so because we experience the power of the Sun. (representative of Indra in the sky) in this period first in the form of intense heat during Grīṣma Ṛtu and then in the form of abundant rains in Varṣā Ṛtu. The last four months of Śarada and Hemanta Ṛtus covering the period 22 August to 21 December make up Candramā Ṛtu after Soma (representative of Indra in antarikṣa). This is so because we have the most beautiful full moons in these months. Our present division of the year into hot (March to June), raining (July to October) and cold (November to February) seasons is on the same lines.

2. Months :-

The first five months of the Aśvini calender are Aruṇa (22 Dec to 20 Jan.) Aruṇarāja (21 Jan. to 20 Feb.) Puṇḍarīka (21 Feb. to 21 March) Viśvajit (22 March to 21 April) and Abhijit (22 Apr. to 22 may) indicate the increasing power of the Sun. Then follows appropriate Indian seasonal names Ārdrā (humid, 23 may to 21 June). Pūrṇiawān (wet 23 June to 23 July), Unnavān (Sprouting 24 July to 22 Aug.), Rasavān (Juicy, 23 Aug. to 22 Sep.), Irāvān (frity, 23 sep. to 23 October), Sarvauṣadha (abundent vegetation, 24 Oct. to 21 Nov.) and Sambhāra (prosperity from 22 Nov. to 21 Dec.) This again shows that Vedic people were residents of India.

3. Aśvini śastra :-

We have noted earlier that Aśvini śastra was recited during the Pravargya cermony before the

commencement of Gavāmayanam sacrifice. Tilak had argued that he took long time for its recitation and it talked of 30 dawns. On this basis he concluded that it indicated a dawn of 30 days that is found in the arctic region which must be the original home of the Āryans. But we have pointed out (4) that the first five verses of Aśvini śastra speak of 5 dawns separately while the sixth verse speaks of 30 dawns in groups of six. We interpret it as indication of the earlier practice of introducing 5 extra days at the end of Gavāmayanam sacrifice of 360 days and the later practice of introducing an adhikamāsa of 30 days after 6 Gav amayanam sacrifices. And the long night is the night of winter solstice.

4. Names of directions :-

At the beginning of Gavāmayanam sacrifice in December the prevailing words in the Punjab-Rajasthan region which forms the cradle of Vedic civilization come from north west, hence that direction is called Vāyavya. And the flames of the sacrificial fire are swept to south-east, so that direction is called Āgneya Nirṛti the clamity of thunder and lightning comes from south-west hence the name Nairṛtya for that direction. Finally Himālayas, the abode of Īśānå lies in North-east, so the name Īśānya for that direction.

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The Orion and the Problem of the Chronology of Vedic Literature.

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Indian Astronomy :-

A. L. Basham in the "The Wonder that was India" observes, "There is no doubt that Pāṇini's grammar is one of the greatest intellectual achievements of any ancient civilisation and the most detailed and scientific grammar composed before 19th century in any part of the world". The renowned linguist Mr. J. L. Ferth says, "It is impossible to imagine the existence of the science of phonetics, had the knowledge of Indian grammarians and phoneticians remained unknown to us". Sir William Jones acquainted the Westerners with the niceties and conciseness of Sanskrit language. Such careful attention to language presupposes a high level of critical intellectual ability required for intensive preoccupation with astronomy, mathematics and other scientific disciplines. The precise movements of the Sun, Moon and visible planets in relation to the fixed star of the constellations demands daily observations using astronomical instruments. One such instrument, Turīya is mentioned in RV. 5.40.6. wherein the sage Atri predicted the time of onset and end of total solar eclipse[1]. Conjunciton of Jupiter and star of Tiṣya constellation (Tai. Br. 3.1.1.) is observed[2]. That the planet venus is nearer to the Sun than the earth is

indirectly suggested in Ven Sūkta[3] rv. 10.123.

Vedic deities are universal archetypes of great flexibilty. Not only they are spiritual beings with whom mystic communion is sought for but they are forces associated with nature's spectacles-firmament, light, wind, celestial waters, earth and mighty forces of the celestial vault in which two luminaries, the planets and the stars and stellar configurations pulsate with energy. Today we scarcely look up at the sky at night and when we do, we barely are able to identify the visible planets, stars and constellations. Few people are aware of the fact that like the Moon, the stars too traverse the celestial vault. Fewer still know that at the two equinoxes, the sun seems to hover for a while in the sky, or the constellation Ursa Minor revolving around the pole star in exactly 24 hours makes a perfect nocturnal clock.

Astronomy was not born of idle curiosity. Knowledge of the luminaries was vital to the existence of the ancients. By the stars merchants navigated across the oceans and deserts and farmers planted their precious crops at the right time to guarantee a harvest of plenty. regularities in the sky provided the key to sacred time and space. The behaviour of the Sun, Moon and planets, stars was of decisive importance for the ritual calender. It was the task of religious priests to study the heavenly pattern so that the rituals would reflect faithfully the divine order. More than that the celestial geometry served the ancients as an archetype for their sacred buildings-altars, temples and cities. "Stonehenge in Britain is a giant three dimensional computer erected

in stone in 3000 B. C. that permitted the precise calculation of the solar solstices and the equinoxes as will as extreme positions of the Moon," says British astronomer G. S. Hawkins. Much of the Egyptian astronomy and symbolism revolved around the star Sirius, the brightest star of the constellation Canis Major (Vyādha of Hindu astronomy) in the Southern night sky. It was associated particularly with Isis. The helical rising of the star sirius coincided with annual flooding of Nile, bringing bounty to the country. The four sides of the colossal Great Pyramid of Egypt, ascribed to the pharooh Cheops are precisely oriented to true North, South, East and West (diviation is between 2′ to 2.5′) and its Southern shaft was aligned to the star zeta Orionis and the Northern shaft was aimed at the star Kochab in Ursae Minoris. The ancients were adept in the use of astronomical observation equipment.

Precession :

The axis of rotation of the earth is inclined at an angle 23.5 degree with respect to the direction of its orbital motion around the Sun. We traditionally believe that pole star does not alter its position, hence it is called Dhruva. But the elongated axis of the earth does not always point to the same fixed star but always sways from side to side like the axis of a spinning top. At present alpha Ursae Minoris is the pole star, as the axis of the earth is approaching it, but around 3000 B. C. pole star was alpha Draconis which was later followed by beta Ursae Minoris. Thuban was the pole star when the pyramids of Egypt were being built. 12000 years from now it will be vega

(Abhijit). The earth is rather flat at both the poles but buldges at the quator, hence precission of the equinoxes and solstices and the seasons is distinctly observed around the tropical regions. Precession of the vernal equinox from Kṛttikās to Mṛgaśiras and before that to Punarvasu is the leading theme of Lokamanya Tilak's expectional book "The Orion", more than one hundred years ago. Recently (1969) Santillana and Dechend have put forward the same idea in their work "Hamlet's Mill."

Alpha Draconis is also known as Thuban or Kaśyapa which according to Tai. Āraṇayaka 1.7.20 does not depart from Meru.

The annual celestial circuit of the Sun is due to the motion of the earth in its orbit around the Sun. From the early it appears that the Sun is moving in relation to the background of distant stars. Ait. Br. expressly states that the Sun never abandons its central location[4] (in its planetary system) Air. Br. 14.6. This circuit is called the ecliptic (Krāntivṛtta). The constellation of stars that fall along it are known as the Zodiac. The 360 degree orbit is divided into 12 parts, each part of 30 degree or 27 parts, each part of $13^0\ 20'$, resulting in 12 Zodiacal signs or 27 nakṣatras. The nakṣatras are lunar mansions. To traverse one nakṣatras the Moon takes 1 day and 7 while the Sun's sojourn in one nakṣatras is 13 and 5/9 days. Each nakṣatra is divided into 4 parts each part (Caraṇa) of $3^0\ 20'$. The region of he celstial vault occupied by each Zodiacal sign (Rāśi) is not uniform, hence the time taken by the Sun to traverse each Zodiacal sign is not uniform. The Royal Astronomical Society added

one more Zodiacal sign called Ophiuchus to Zodiac's dozen signs and fixed the dates of the Sun's sojourn in each of them. The Zodical signs are not found in the Vedic literature. They (Rāśis) are mentioned in Baudhāyana Sūtra[5]. In the nakṣatra system also at few places correlation between the nakṣatra and its leading star (Yogatārā) is unsatisfactory, for instance the divisional Citrā nakṣatra exends from 173° 20′ to 186° 40′ and in that are two fixed stars of Citra and swāti nakṣatras. The divisional Swāti nakṣatra extends from 186° 40′ to 200° in which there is no fixed star at all. But such instances are very few. There are 88 constellations out of which 13 are on the ecliptic, 29 between the ecliptic and north pole, and 46 between the ecliptic and South. In Indian astronomical works only 27 nakṣatras on and around the ecliptic are considered. In the best known mith of India, the churning of the primordial milk ocean, (as graphically described in Mahābhārata --I-17-19) by Devas and Dānavas, employing Vāsuki serpant as rope and mount Meru as churning stick, the following astronomical facts are used. The rope is the ecliptic, the stick is the elongated axis of the earth passing through pole star (Meru) the Northern and the Southern constellations are Devas and Dānavas respectively. Milky way is the milk ocean, in which the solar system traverses. The churning symbolises precessional shift of the earth's position in relation to the stars. One of the product of churning process was Kālakūṭa poison which engulfed the universe and to prevent its extinction God Rudra drank the poison.[6] (RV. 10.136.7.) The precession completes a whole

cycle around the ecliptic in 25,900 years (about 26000 years). If the vernal equinox is in Kṛttikā nakṣatra then 26000 years will be required for the return of vernal equinox to Kṛttikā again). Indian astronomy has Sāyana and Nirayana methods, in the former nakṣatras or. Rāśis begin from the vernal equinox, the point which changes due to precession and in the later from a fixed point in Citrā nakṣatra. Both methods have their followers, it appears Nirayana method is gaining popularity.

The rate of precession :-

Precessional changes are the hallmark of the Indian astronomy, the essence of the system. The astronomy of India has always been "Sidereal (based on stellar postion). It determines the positions of the signs of Zodiac relative to observable fixed stars. This is different from the Tropical Zodiac of the old Western era, in which the signs of the Zodiac are related to the equinoxes and solstices (the Tropics of Cancer and Capricorn). The sidereal Zodiac must necessarily take the point of the precession into consideration whereas the Tropical Zodiac ignores it. The tropical Zodiac uses the seasonal points as its prime consideration whereas the sidereal Zodiac uses specific stars. It uses the most universal of all clocks, the stars. As the Vedic astronomy is Sidereal, we cannot discountenance the astronomical references commonly found in the Vedic literature relative to precession. We cannot ignore them in ancient texts just because they give us dates too early for our conventional veiw of human history. In astronomical and Vedic literature we can trace the

precession back to early ancient periods as an ongoing record of such changes was kept. The precession changes at the rate of 50.25 seconds per year. In Sūryasiddhānta (Indian astronomical work) it is 54 seconds. Hipparchus, a Greek astronomer 125 B. C. gives it as 36 seconds, which is far from being accurate. Greeks did not know how to calculate it. It was in vogue for many centuries in Greece and later accepted by Ptolemy. Prof. W. D. Whitney (1860), an American Vedic scholar who believed firmly that Indians borrowed astronomy from Greeks, when noticed almost accurate rate of precession in Sūryasiddhānta called it "a lucky hit"! 19th century Vedic scholars of West had preconceived notions about Vedic literature and there is a tendency among them not to trust any astronomical data from Indians, as they are believed to be unscientific people. "Indian astronomy was borrowed from the Chinese", was the veiw of a French scholar Mr. Biot (1840). The equinotical points recede by one degree every 72 years. This means every thousand years the equinox has to be moved back by one lunar constellation or two lunar constellationals every 2000 years. As the sidereal year is more than the Tropical year by 20 minutes and 19.9 seconds precession of the season by one month will take place every 2150 years and Two months make a season. If Vasanta (spring) season takes place in Phālguna then after 2150 years it will take place in Māgha. Two and one-fourth nakṣatras comprise one Zodiacal sign (Ṛāshi). For every 2160 years one Zodiacal sign has to be moved back. A sidereal year is marked by the time the Sun

returns to the same position in the fixed stars, this means the time Sun traverses from one nakṣatra to the same nakṣatra. A sideral day is four minutes shorter than a regular day so there are 366 of them in a normal year. This orientation to a specific point in the sky causes the calender to gradually slip backwards with the precession. Thus the indication of the precession is built into the Indian calender through the usage of sidereal time. In India the Sun entering the sign Capricorn is celebrated on 14th January as this is the observable sidereal position, whereas Western Tropical calenders use December 21 as the date of winter solstice (which is actually now in the Zodiacal sign of Sagittarious). Sidereal calculations are more complicated than Tropical ones. Thus Indian astronomy is a specialsed system requiring precise astronomical observations and ongoing knowledge of the exact placements of the planets and equinoxes relative to the fixed stars.

Measurement of Time in Vedic literature :-

"Every thing is bounded by time," says Atharvavedic hymns[7]-19.53-54 & 1-15. The seers of Ṛgveda were adorers of Mother Nature. Not blind worshippers but their ardent adoration was coupled with genuine curiosity and an urge to know the physical and divine aspects of the natural order which they called as Ṛta. The three prime factors intimately and importantly associated with the life on the earth are the firmament, Antarikṣa (atmosphere) and the earth itself. That these are the dwelling places of protective deities was the predominant notion as in

RV. 1.139.11 verse[8]. The ninth multiple of 3 is 27. Naturally 27 constellations along the ecliptic not only became the abodes of deities but also the measure of all important time. Such pairs of nakṣatra-deity are mentioned in Tai. Saṁ. 4.4.10. and 1.5.1 of Tai. Br. A few examples are :- Punarvasu-Aditi; Tiṣya (Puṣya)-Bṛhaspati (Jupiter); Mṛgaśiras-Soma; Rohiṇī-Prajāpati; Rāvati-Pūṣan etc. The number 34 is mentioned twice in Ṛgveda-meaning thereby 27 nakṣatras + 5 planets + Sun and Moon. The planets are Pañcadevāḥ. The Moon resides in nakṣatra. However the orbit of the Moon is not exactly aligned to the ecliptic but lies 5 and half degrees on either side of the ecliptic. Where lunar orbit intersects the ecliptic the interesection points are called lunar nodes (Rāhu and Ketu-former is north lunar node). The synodical position of the full-Moon in a particular nakṣatra is not at all easy to determine with naked eye. Only 4 nakṣatras out of 27 remain visible when the full-Moon approaches them-namely Maghā, Jyesṭhā Citrā and Rohiṇī. Other nakṣatra become invisible in the Moonlight when the position of the full Moon is 8 degree away from them. Hence accurate astronomical calculations are required to locate a particular nakṣatra where the ful-Moon is complete. In the Vedic literature the months were lunar and the year was solar. The table below gives duration of lunar month, lunar year, solar year. D=days. M=minutes. H=hours. S=second.

	D	H	M	S
Lunar month (sidereal)	27	7	43	11.5
Lunar month. Synodical.	29	12	44	2.87

From New-Moon to New-Moon. Lunar month=29.530 days

Solar year. Sidereal.		365	6	9	9.6
Solar year. Tropical		365	5	48	49.7
	Difference :	0	0	20	19.9
Solar. Sidereal year		365	6	0	9.6
Lunar. Synodical year		354	8	48	34.44
		10	21	20	35.16

Vedic chronlogy and Vedāṅga Jyotiṣa- Lokamanya Tilak. 1913 P. 31-32. Tithi is little smaller than a day and is a characteristic of Indian astronomical works and calenders. It is only determined by calculation alone as it can not be perceived. Tithi is 30th part of the lunar month of 29.5 days and is equivalent to the time taken for 12 degree difference in the positions of the Sun and the Moon along the ecliptic, as the relative motion of the moon is more than that of the Sun. Thus on Tithi = 29.5 divided by 30 = 0.9833. . day. In an year of 365 days and some, there are 371 tithis. Tithi is mentioned in Ait. Br. 32.10[9] but not in the Veda-Saṁhitās. The ninth multiple of 371 is 3339[9a]. That 3339 Gods worshipped Agni is mentioned in RV. 10.53.6. Thus 3339 Vedic deities represent a ninefold division of the year measured by tithis. The microcosmic elements of time in Vedic calenders are Muhūrta, Ghaṭikā, Palā kalā, Nimeṣa, Kṣaṇa. One Muhūrta=48 minutes. One Ghaṭikā=24 minutes One Pala=24 seconds. One Kalā=3.2 seconds. One Nimeṣa=0, 0083 seconds. Kṣaṇa is mentioned in Mahābhārata, Śāntiparva Adhy. 36. but what it represents is a matter of

conjecrture. (Bhāratīya Jyotiṣaśāstra-S.B. Dixit). The year is mentioned as Varṣa, Samā, Saṁvatsara, or sometimes by the names of seasons such as Śarad or Hemanta. The term one Varṣa represents one revolution of the ecliptic by the Sun. The term Saṁvatsara is related to one revolution of the ecliptic by Bṛhaspati (Jupiter) in about 12 years, as in Bārhaspatya Saṇvatsara. The macrocosmic structure of time, for instance one day of Brahmā, manifests in the term Yuga. Ordinarily 5 years make one Yuga. But Kṛtayuga (4000 yrs), Tretāyuga (3000 yrs.) Dwāpara (2000 yrs.) and Kaliyuga (1000 yrs.) along with interpolated years of Sandyānśa (2000 yrs) = 12000 years. The man made years of these will be 12000 x 360 = 4320000 years equivalent to one Devayuga. Thousand such Devayugas (4320000000 yrs.) = One Kalpa or one day of Brahma (Manu Smṛti). Śatapatha Br. 10.4.2.23. mentions the total number of letters in verses of Vedas is 432,000. What a coincindence! The famous verse of the great seer Vāmadeva Gotama in RV. 4.58.-Catvāri Śṛṅgāḥ...[10] probably denotes the number of years in one Kalpa (432,0000000).

Indian Calenders :-

The names of the months originated from nakṣatras. Kārtika was named after the full-Moon was noted in Krittikas, then with a gap of 2 or 3 nakṣatras other months came into use. The days were naturally named after the Sun, Moon and 5 planets as mentioned in Atharva Jyotiṣa and Yājñavalkya Smṛti[11] (295). Before the British Raj 20 or more calenders were in use through out the length and

breadth of the Indian subscontinent. Out of them Śaka was and still is most common. Śaka means an Era or Arebic Sana, and probably refers to Śaka kings who were defeated by King Vikram. Etymology is uncertain. Mohamedans use Hijari Sana-Hijra means to flee and prophet Mohamed had to flee from Mecca to Madina on 16 July 622 A.D. This calender is based on lunar months with no intercalary days. Addition of 78 or 79 to Śaka gives respective Christian year. Interestingly Saptarṣi calender was prevalent in Kashmira and Multana as noted by Al Beruni (1030 A.D.) and Kalhaṇa in Rajtaraṅgiṇi (1200 A.D.) Saptarṣis (Ursa Major-Great Bear) traverse one nakṣatra in 100 years and the entire ecliptic in 2700 years. Usually the calender was limited to 100 years and then the cycle was repeated. This is not the place to account for other calenders. Rectangular and circular altars have been discovered at various Harappan sites as in Baluchistan in the west, in Uttar Pradesh in the east, Gujarat in the South and this led Pakistani archeologist Dr. Ahmed Hasan Dani to surmise that all this area was inhabited by people of sacrificial culture. Indus culture was not separate from Vedic culture writes Mr. Sriram Sathe in Bhartiya Historiography (cp.11). The imaginary hypothesis of Āryan invasion theory had no archeological foundation hence was discredited. The age of Indus civilisation is 3000 B.C.-1500 B.C. akin to Kṛittikā period of Vedic chronology as stated in "The Orion". Sacrifical ritual culture had reached its zenith during Brāhmaṇa period. Indus civilization was larger than any other ancient civilization including Egyptian,

Babylonian etc. and was more advanced and sophisticated and had Indus script from which Brāhmī script originated. Indus script was used in maritime commerce and for socio-economic purposes. To measure a substance they had smaller and larger weights, tape measures for length and area (sacrificial alter construction of various shapes requires precise knowledge of Geometry), the presumption that a sort of calender to measure Time must have been in use is not out of context.

Equinoxes and solstices :-

In Indian astronomical works the lunar constellation are listed in order of their sequence starting with the nakṣatra that marks the vernal equinox. Medieval lists begin with Aśvini which marks the beginning of the vernal equinox. Ancient list started with Kṛittikā (Pleiades). Earlier reference points are also found. When the equinox retreated to previous sign and thereby to a previous month a major reform of the calender was necessary. Astronomy is called "The eye of the Veda" because the timing of the rituals was of paramount importance to obtain appropriate and auspicious results. Indian astronomers compute the Zodiac differently and more accurately than the Greeks. Indian astronomy has a long history and extensive literature following different methods than those of Greeks. For isntance, the rate of precession has been computed by several observers by different methods and the given rate varies from 46.5 "(Parāśara) to 59.9" (Muñjāla) and almost accurate rate of 54 seconds in Sūrya siddhānta. The Indian calender has several types of

time including sidereal time. Sidereal month is measured according to the Moon's return to the same place in the fixed stars, hence it amounts to 27 days which is divided in to 30 lunar days (tithis) which are traditionally used for Vedic rituals. A sidereal month needs clear observation of the Moon's position among the stars. A sidereal year is the time taken by the Sun to return to the same position among the stars.

Thus the sidereal day is 4 minutes shorter than a regular day so there are 366 of them in a normal year, and 6 seasons each of 61 days. Any culture using sidereal Zodiac finds the points of equinoxes retreat by a week or so every 500 years or about 7 degrees of the Zodiac-the nakṣatras provide the Moon with a different constellation for every day of the lunar month. It is a more scientific system and easier to compute than the 12 signs of the Zodiac in which there is a change of sign for the Moon every two the quarter days. For the purpose of the sacrifice the Vedic year started art the Winter solstice. The ancient sacrifice followed a solar symoblism identified with the Sun and the year (Saṁvatsara), with the Sun being born or renewed at the time of the Winter solstice. The lunar constellation making the full Moon at the Winter solstice is thus mentioned as the first month of the year. When the Moon is full, the positions of the Sun and the Moon are diametrically opposite making an angle of 180 degrees between them, for instance if the full Moon is at the summer solsticial point then the Sun is at the Winter solsticial point. Vedic literature tells us some of the months

named by these lunar constellations, and the days within them in which the solstices occured, affording additional means to calculate these eras.

During the Summer solstice (21st June) the shadow cast by a vertical stick at noon is shortest while during the Winter solstice it is longest (21st December). At the equinoctical points the duration of the day and that of the night is same. The word "Viṣuvan" mentioned in Vedic literature is the central day of the annual Satra, for instance Gavāmayanam, dividing the satra into two equal half year periods. Does it refer to equinoctical day? The equinoxes move along the ecliptic in the direction opposite to the annual course of the Sun. In Vedic times the earth was abstractly represented as going through the celestial equator which intersects the ecliptic at two equinoctical points and thus the ecliptic has two halves-northern band of the Zoidic going from the vernal equinox to the autumnal equinox and a southern band of the Zodiac reaching from the autumnal equinox to the vernal equinox, representing cosmic waters below in the Southern hemisphere. The central frame of the cosmos is the axis of the world-"Skambha" in Atharva Veda[12] 10.7.35. which sustains heaven, earth, midregion and six directions. At the four corners of the world are the nakṣatras rising helically at both the equinoxes and solstices. The two great circles of the celestial space which intersect each other at the pols are the equinoctic coloures. The words Devayāna and Pitṛyāna occur in RV. 1. 72. 7. 10. 2. 7.[13] and 10.8.16- the path of death is to be reverse of Devayāna. Agni is said to

have knowledge of Devayāna by seasons (10.98.11). Chhāndogya 4.15.5. and Bṛ. Ār. Upaniṣads (4.2.15) call these as Devaloka or Devapatha and Pitṛloka.[14] Certain scholars (including Lokamanya Tilak) advocated a theory about the original home of the Aryan people at the circumpolar regions in the North wherein days and the nights were of long duration and the dawn and the sunset occured in continuous succession for some days. Such a phenomenon is explained by the helical rising of the Sun at the vernal equinox and the Sun reaching its apogee 23.5 degree from the equator and turning to autumnal equinox. Mārtaṇḍa-the dying Sun was the Sun then at the autumnal equinox. The bright northern band of the zodiac was Devayāna. The Sun then entered cosmic waters and remained out of sight from the autumnal equinox to vernal equinox forming the dark Southern band-Pitṛyāna governed by Yama-mythology symbolised by the natural course of the Sun. When the Indian Āryans came to reside in the northern part of India, path of the Sun from the Winter solstice-Makara Saṅkramaṇa- to the Summer solstice - Karka Saṅkramaṇa- was labelled as Uttarāyaṇa and the path of the Sun from the Summer solstice to the Winter solstice as Dakṣiṇāyana. Hence the course of the Sun along the ecliptic has two interprertations, the latter interpretation is found in all Indian astronomical works.

Seasons and Months :-

That the seasons of the Gods are Vasanta, Grīṣma, and Varṣa and the seasons of the manes are

Śarad, Hemanta and Śiśira and when the Sun is northernly it is among the Gods and when southernly it happens to be among the manes[15] is mentioned in Śatapatha Br. 2.1.3. Two months comprise a season. That the seasons are caused by the course of the Sun along the ecliptic is clearly stated in ṚV.[16] 1.95.3. The names of the months such as Madhu, Mādhava etc.[17] are mentioned in the Tai. Saṁ. 1.4.14. The meaning of the names of these months is related to the natural conditions that are met in a particular season. For instance, the names Madhu and Mādhava are most appropriate to the natural conditions in the spring (Vasanta). Caitra, Vaiśākha etc. as the names of the months are not found in Tai. Saṁ. but occur in relatively later Brāmaṇas such as Śatapatha, Kauṣītaki, Pañcaviṁśa and these names are derived from the names of the nakṣatras and not from seasonal names. Thus these names belong to the later era of the Vedic literature 2000 B. C. or thereabout. That the seasons and the Saṁvatsara begin from Vasanta is stated in Tai. Br. 1.1.2.6.7 and 3.10.4.1[18]. But on which particular time (day) of the year a season begins or ends requires exact knowledge of the course of the Sun and the Moon along the ecliptic and precise means to measure the time. Commonly it is observed that the Vasanta starts one month before the Sun is at the vernal equinox. Seasons are also different at different latitudes, for instance, seasons in India and in Central Asia have different onsets. Months of Caitra and Vaiśākhā are so closely related to Vasanta that though Vasanta is

in Māgha and Phālguna now, due to precession, the tradition to celebrate onset of Vasanta in Caitra Vaiśākhā is prevalent, and Caitra is still called as Madhumāsa (month). India is primarily an agricultural country dependent largely on South-West and North-East monsoon rains, the onset of which in different parts of the country is marked by different times, hence Rabbi harvest season comes to an end at different times. From Vedic times 2 crops in year-Kharip and Rabbi-are harvested in Indian subcontinent. With different times for the Rabbi season it is natural to have beginnings of the New year in different months.

The new year :-

The Roman calender originally was of 10 months from March to December, which was the 10th month. 11th and 12th months namely January and February were latter added. Still 1st January is celebrated as the first day of the New year. In the Vedic times the year started with onset of Vasanta season in the month of Madhu which in the latter era came to be known as Caitra. Traditionally we celebrate the New year in Caitra. The New year begins from the New Moon of the bright half of Caitra-Caitra Śukla Pratipada. When the Sun is in Aśvini the full moon is in Caitra. The Zodiac sign of Aśvini is Aries. Hence the beginning of the New year (Meṣa Saṅkramaṇa) is in Aries. Al Beruni (1030 A.D.) in his "India" (vol. II. p. 8) states that Mārgaśīrṣa was the month of the New year in Sindha province. In Bhagvadgītā 10.35. Mārgaśīrṣa is the leading month. There are

references that the month of Vaiśākhā or Āṣāḍha or even Bhādrapada were the months of the New year. However the New year starts in the month of Caitra. In Tai. Saṁ. 7.4.8. and Tāṇḍya Br.19 5.9. the Ekāṣṭaka[19] (8th day of dark half of Māgha), Full Moon in the Phālguni nakṣatra, Full Moon in the Chitrā nakṣatra are discussed for the purpose of consecretation ceremony with details about the favourable and unfavourable points of each. Either of these were the beginning of the saṁvatsara. In Sāmavidhāna Br. 2.4.-Yā Rauhiṇī vā Pauṣī vā Paurṇamāsī- or in Amarakośa 1.3.23. Āgrahāyaṇi etc, feminine words are indicative of particular nakṣatra and not the particular months. As noted earlier in Tai. Saṁ. and early Brāhmaṇa period the months were not addressed as Caitra etc. Āgrahāyaṇi mens the nakṣatra's night on which the New year commences (Hāyana means year). According to Pāṇini[20] 4.2.22. Āgrahāyaṇika derived from Āgrahāyaṇi is the name of Mārgaśīrśa. The new year commenced on the next day of the Mārgaśīrśa full moon when the nakṣatra was Mṛgaśīras and the first month of the new year was Pauṣa. In Mahābhārata and Sūtra literature Vasanta is the first season and its months are Caitra and Vaiśākha. In Vedāṅga Jyotiṣa the New year commences from the Winter solstice. In "The Orion" Lokamanya Tilak advocates that Mārgaśīrśa was called āgrahāyaṇika, not because Mārgaśīrśa was the month from which the year commenced but Āgrahāyaṇa was the name of Mṛgaśīras nakṣatra in which the vernal equinox occured. The ear that commenced is called Āgrahāyaṇa. This argument is

in accordance with the interpretation that Devayāna begins at the vernal equinox.

Śatapatha Br. 2.1.2 states "These so many Kṛttikās do not change their position from the East, while other nakṣatras do change their positions. So Agni be consecrated during Kṛttikās".[21] Tai. Saṅ. 7.4.8. mentions "Kṛttikās occupy the first place in the list of nakṣatras".[22] Tai. Br. 3.1.1.6. and 5.1.2. state that Kṛttikā are the mouth of the nakṣatras. This amounts to the vernal equinox in the time of Tai. Saṅ. was in Kṛttikās and this period is 3000-2500 B.C. With the precession of the equinoxes about 1000 years per nakṣatra, the previous successive vernal equinoxes must be in Rohiṇī, Mṛgaśiras, Ārdrā, Punarvasū etc.

	Zodiacal sign	Nakṣhatra	Period
I	Pisces	Uttarā Bhādrapada	To-day
II	Aries Revati	At the end of Varāhamihira	400 A.D. Bṛhatsaṅhitā
III	Aries	10 degree of Bharaṇi	1380 B. C. Vedāṅga Jyotiṣa[23]
IV	Taurs	Kṛttikā	2500 B.C. Late Vedic age.[24]
V	Gemini	Mṛgaśiras	4000 B.C. Middle Vedic age
VI	Gemini	Punarvasu	6000 B.C. Early Vedic age.

Now the point of the vernal equinox is in Uttarā Bhādrapadā and it is approching the sign of Aquarius-what we call dawning of the Age of Aquarius. The table below shows the *position of the vernal equinox*

and its relation to various periods of Vedic times.

At the time of Vedāṅga Jyotiṣa as recored in the 5th verse of that book, winter solstice in the beginning, of Śraviṣṭhā (Ghaniṣṭhā) summer solstice in the middle of Āśleṣā and autumanal equinox 3 degree 20′ of Viśākhā. In late Vedic age the summer solstice was in Maghā. At the time of middle Vedic age the winter solstice 3 degree 20′ of Uttarā Bhādrapadā, the summer solstice 10 degree of Uttarā Phalguni and the atumnal equinox in Mūla. At the early Vedic age winter solstice in Revati, the summer solstice in Citrā and the autumnal equinox 6 degree behind Abhijit, which is so far away from the ecliptic that it is not included in the list of 27 nakṣatras, though it is designated as 28th nakṣatra. It must be remembered that above figures indicate only the early limits of the period but the later limit is a matter of conjecture. References (II, III, IV) are described in the present tense in the related books hence indicative of what nakṣatras were at the 4 cardinal points at that time. The periods are calculated form the given information. There is no express statement in the Vedic literature that Mṛgaśiras and Punarvasu were the first in the list of nakṣatras or they were the mouths of the nakṣatras as we find in the case of Kṛttikās.

Mythological legends and the Nakṣatras :-

Tai. Br. states "the nakṣatras are dwelling places of Gods. The nakṣatras are the images of what is portrayed on the earth (Pṛthivyāś citrāṇi)".[25] The Sun, the Moon and the planets are the gods who traverse

along the ecliptic on the background of the nakṣatras. Elements, Nature and its regular order-Ṛta-are the deities of the Ṛgveda. It is no wonder that the extensive serpentine pure white band of the Milky way in the celestical vault, peculiar configurations of a group of constellations, and the striking graphics in the clear firmament on Winter and Summer nights provided enough material to the imaginative faculties of the seers to weave fascinating tapestry of legends. Greatness of Lokamanya Tilak's intellect lies in the fact that he alone revealed the underlying hidden meaning-be it astronomical or geographical as explained in his monumental works. The Arctic Home in the Vedas and the Orion. It will be asked as to why medieval Sanskrit scholars like Sāyaṇācārya, Skandaswāmin, Veṅkaṭamādhava etc. and even earlier scholars like Yāskācārya could not interpret convincingly as Lokamanya has done? These scholars though well versed in Sanskrit literature, Vedic or otherwise, were ritual oriented (yājñika) and firmly belived, that Vedic literature as Apauruṣeya (utterances of Brahmā) hence timeless-Anādi. They had scant interest in astronomy-though astronomical works of Varāhamihira, Bhāskarācārya (1072 A.D.) etc. were in use and relied heavily on Paurāṇic works. Thus their reading of the Vedic literature became unichannelled, restrictive, yājñika and to a certain extent monotonus. There are many references to the nakṣatras, planets in Ṛgveda or successive continuity of the dawn but Sāyaṇa's explanation is either literal or play on words. It was a perspective through an unfocussed lens. To certain eminent Western

scholars of 19th century everything Indian was inferior-be it ancient or modern, be it astronomy or mathematics. The firmly believed that Indians lack independent intelligence and are in a habit of borrowing scientific axioms from Greeks, Chinese, or Babylonians etc. Their interpretations of the Vedic literature and astronomical works are largely based on this bias. Strangely enough there were Indian scholars during British Raj, who subscribed to the biased Western view and believed it as Vedavākya! This also amounts to a prespective through an unfocussed lens. Had it not been exemplary exposition of such misinterpretations of Western scholars by Lokamanya Tilak in 1893, we would have been in the darkness about our great heritage, Vedic literarture. To a certain extent later excavations at Harappan sites (more than 260 to this date) and archeological findings of the larger and greater Indus-Saraswati civilization, helped to clear the clouds of misconceptions about ancient Indian culture. But one cannot forget the foundations led by Lokamanya in absence of archeological relics. Different countries had different legends based on the nocturnal celestial sceanario. RV. 10.68.11 of Ayāsya Āṅgiras mentons that the night sky studded with the constellations resembles a dark horse adorned with golden ornaments.[26] This was achieved by the Fathers (who are embodiments and guardians of light). What is the origin of the lunar constellations? The term nakṣatra occurs several times in the Ṛgveda. Some of the names of the lunar constellations are found in the

Ṛgveda such as Aghā (Maghā), Arjuni (Phalgun), Revati, Caitrā, Punarvasu but no specific list of the nakṣatra as seen in Yajurveda, Atharvaveda occurs in it. The lunar constellations have been employed by Indians. Arabs, Chinese in ancient times. The Arabs did not invent them, as the Zodiac system did not gain popularity until medieval times. Probably the Arabs came to know of it from the Persians who like Indians had a similar well developed astronomical system. The Chinese system though begins with Kṛttikās (Pleaides) has not any Zodiacal basis but only equitorial. As the lunar constellations appear to have originated as a part of the Zodiacal system it is unlikely the Chinese invented them. In the Indian astronomy deities of the Vedic pantheon such as Agni, Soma, Indra, Pūṣan, Twaṣṭā etc. are the rulers of lunar constellations and not later Purāṇic gods or godesses. Mythological legends are woven around the Vedic deities and many times in the Ṛgveda's verses, only deities of the nakṣatra are mentioned and not the lunar constellation's special names. The same system is followed in the older astronomical works such as Somasiddhānta, Pitāmahasiddhānta etc. Mr. Ghosh in his "Studies of the Ṛgvedic deities" (p.22) observes, "Most of the asterisms (nakṣatras) at an early period were known by the names of the presiding deities". Later they were assigned special names. As the names of the deities are Ṛgvedic in origin and in certain verses of Ṛgveda, constellations are identified from the names of the presiding deities and no scholar questions the antquity of the Ṛgveda-Mr. Max Müller assigns it the first and the foremost

place in the library of ancient literature-it is obvious and requires no additional proof that Indian astronomy is an independant product of the observations and astronomical calculations of the Vedic seers. When such a Vedic civilisation is called "primitive" it denotes either ignorance or deep seated prejudice. The verse 1.162.18. of Dīrghatamas Aucithya mentions[27], "The hatchet cuts 34 ribs of the swift horse, dear to the Gods. Cut it with skill so that each part is flawless. While dissecting declare piece by piece. "The number 34 is not an anoatomical description of the chest ribs of the horse but is indicative of 27 lunar constellations + 5 visible planets + the Sun and the Moon. The seer wishes strongly that each part must be flawless and named separately suggesting clearcut division of the Saṁvatsara. The verse 10.55.3. of Bṛhadukta Vāmdevya mentions[28]- (Indra) occupies fully the earth, Antarikṣa, and the heaven. By the lustre of equal intensity of the 34, arranged in the groups of seven (seven by seven) traversing differently, he observes the five Gods placed in front of him, according to the seasonss. "The 27 or 28 nakṣatras arranged 7 each to the quarter (90^0) of the 360^0 of the ecliptic are said to have the lustre of equal intensity and traverse the ecliptic in different periods. Pañca Devas are the 5 planets coursing along ecliptic in the company of the Sun and the Moon. The 4 cardinal points in the Sun's course are obvious in this verse.

Reference to the Kṛttikās is not found in the Ṛgveda. There was a system when the year began with Maghā. Amarakoṣa 1.4.13. mentions "Two

months each commencing with Maghā make seasons and 3 such seasons make an ayana.[29] In the Mahābhārata epic the old warrior Bhīṣma awaits to die till the return of the Sun from the winter solstice and this happened in the first half of Maghā. Indian astronomers hold that the vernal equinox in Mahābhārata times was in the Kṛttikās. Tai. Br. 1.2.1. states "The mouth of the nakṣatras is Kṛttikās. "Tai. Saṅ. 7.4.8. and Tāṇḍya Br. 5.9. discuss the best suitable time to commence the annual Ṣatra, Gavām Āyanam. In the days of Tai. Saṅ. the winter solstice occured before the 8th day of the dark half of Māgha, which was a cold season (unpleasant or Avabhṛtha Snāna). Hence 4th day before the full moon in Māgha was the day of choice for the commencement of the year. Prof. Whitney (1860) dates the Tai. Saṅ. as 2350 B. C. Mr. Biot (1840) assigns it 2357 B.C. on the anology of the Chinese who commence their astronomical observations from Kṛttikās. Mr. S. B. Dixit (1896) from the reference in the Śatapatha Br. 2.1.2 that the Kṛttikās do not change their positions from the East" dates this Brāhmaṇa as 2400 B.C. Mr. Bentley (1823) places the vernal equinox 11° behind Kṛttikās and holds that the equinoctical colure bisected the asterism of the Visākhā and suggested 1426 B.C. date of Tai. Saṅ. He was not aware of the statement in the Vedāṅga Jyotīṣa that the vernal equinox at that time was 10° of Bharaṇi and Kṛttikās are 3° 20′ distance from Bharaṇi. For the precession of one nakṣatra, 1000 years must elapse and secondly bisection of the Viśākhā is unscientific. Full

moon in Māgha means the Sun is at the Winter solsticial point and the full Moon is 180^0 distance from the Sun that is at the Summer solsticial point and 90^0 from Māgha at the vernal equinoctical point are Kṛttikās. Most of the Brāhmṇās were composed in the Kṛttikā period and during this time the practice of the sacrificial ritual and the importance of Yajña reached their zenith and the priesthood dominated the culture. Means like the accuracy of the rituals gained more attention than the presiding deities of Yajña. During the Ṛgvedic times the respective deities were praised and their munificence was sought for through the means of Yajña. Deities were of prime importance, hence various references to them and less references to the routine of the sacrificial rituals are conspicuous in the Ṛgvedic hymns. There is no express statement that the mouth of the nakṣatras was either Mṛgaśiras or Punarvasu except the passage in the Tai. Saṅ. 7.4.8. and Tāṇḍya Br. 5.9. or Śatapatha Br. 6.2.2.18. which mentions Phalgunī full Moon is the first nitht of the year.[30] This is coraborated by the statements in Śāṅkhāyana Br. 4.4. and 5.1.[31] and Gopatha Br. 1.19.[32] which states Uttarā and Purvā Phalguni are the beginning and the end of the year. The presumption of 3 beginnings in a year is unsustainable, hence references to Phalguni full Moon and Citrā full Moon indicate previous traditions in the distant past, the cause of which is the precession of the solstices. Traditions die hard as already noted that though Vasanta season today occurs in Māgha-Phālguna still Caitra is credited with

Vasanta. With reference to the Phālguni full Moon and the Citrā full Moon at the solsticial point it is obvious that the vernal equinox took place in Mṛgaśīras and Punarvasu respectively. There is a tradition in the Vedic literature right from the Ṛgvedic times to express one's ideas in the form of metaphor mostly evident in the sūktas of Dīrghatamas Auhithya and Vāmdeva Gotama in Ṛgveda. Interpretation of such passages has to be done with care. When the vernal equinox is in Mṛgaśīras, the winter solstice occurs in Uttara Bhādrapada. The dark half of Bhādrapada is the first fortnight (Pitṛpakṣa) of the manes and so it is observed in Hindus as well in Parasis.

What are the anecdotes related to Mṛgaśīras? Ait. Br. 13.9. relates an interesting episode-Prajāpati desired his daughter who is called by some as Dyau, or by some as Uṣas.[33] She ascended and he in the form of stag approached her. Gods saw that and said that Prajāpati commits an undesirable act. They searched for someone to kill him but could not find anyone. They assembled their fierce parts to form a God whom they named Bhūtavat. One who knew that was born. To him the Gods told to injure Prajāpati who has committed the undesirable act. He said he would do it proved he gets a boon. He wants to be know as the chief of the beasts it was granted and then he was known as Paśumān. One who knew that becomes Paśumān. He went and injured him. One who was struck (by the arrow) flew to the sky and is called Mṛga. One who injured is called Mṛgavyādha. One who ascended is called Rohiṇi-the three jointed

arrow became Trikāṇḍa Bāṇa. "In this episode as past tense is used throughout, that means such a legend is of ancient times handed down from generations to generations. This legend is not found in Ṛgveda. Either it was lost or it was not included when Ṛgveda Saṅhitā was compiled. Same anecdote occurs in Tai. Br. 1.1.10.; Śatapatha Br. 1.2.8. with some differences. In Ṛgveda Indra cuts Vṛtra's head as stated in 10.61.56-7;1.52.10.[34] Vṛtra is Mṛga.[35] In the Greek mythology Appolo's sister cuts off the head of Orion with an arrow. Mahābhārata Sauptika Parva.18.19,14. identifies Yajña with Mṛga. Yajña was killed by Rudra with an arrow. Tistreye in the Parasi's Fravashinam means 3 stars corresponding wih Mṛgaśiras. In the Greek legend the Orion after his death appears in the sky as a giant with girdle, lion's skin and a club in his hand. The girdle is "aivyaonghanem" in Parsi's Haoma Yasht. It is the 'Kusti'-string of cotton thread around the waist-of the Parsis. Upanayana ceremony of Hindus has many identical points in the figure of the Orion. Yajñopavīta, daṇḍa, and the deer skin-piece resemble those of the Orion. One of the three small stars in the head of Orion-Invakā as mentioned in the Amarakośa[36] is the junction star, though the 3 stars in the belt of Orion and not in the head are popular asterism. In the Vedic works Mṛgaśiras nakṣatra denotes head, shoulders, and the knees of the antelope. The asterism Ārdrā is identified with the star in the right shoulder of the antelope. Interestingly the deity of Ārdrā is Rudra that is identified with the star Sirius in Ait. Br. 3.33.'

The Milky way and the two dogs - Canis major and Canis minor :

In the Vedic literature the two hounds are identified as Śwāna and Praśwāna. They are 'Śabalau' (dark brown) of yama- the God of death. They are four eyed, and offsprings of Sarama (female dog of Gods). They guard the gates of heaven[37] and in Ṛ̣V. 10.14.12. Agni is asked to avoid them. The two equinoxes-vernal and autumnal-are the gates of the heaven. In the Avesta, the Chinvat bridge connects the heaven and the hell and the two dogs stand guard at the grates of the bridge. Karberos in the Greek mythology is synonymus with the dog. In Atharvaveda 6.80.3. the hound Canis major is praised stating-"In the waters is thy (hound's) birth, in the heaven is they station, the glory on the earth and in the ocean. With this offerings we adore the greatness of the heavenly dog[38]." The dog is adjcent to the Milky way hence is born in the waters. The constellation Argo Navis in the Southern night sky is the celestial ship mentioned in Ṛ̣V. 10.63.10. as "For our good fortune we shall sail the steady heavenly boat that is without any blemish and is eqquipped with strong peddles."[39] The dog is the guide star for the merchants crossing the seas and on the earth for planting crops. The word 'Shunasirau' in Ṛ̣V. 4.57.5. is indictive of the heavenly hound (Max Müller). The verse states- "O hound, my praise greets both of you. Shower us with thy heavenly waters"-[40]. Sirau is identified as Sairya=Seirios=Sun. The Sun in the constellation Canis Major. Ṛ̣V. 1.105.11. mentions-"In

the middle of the sky the stationed rays of the Sun move to the path of the hound that has crossed the great waters." Both the verses denote the vernal equinox in the dog-star. There is a legend about Ṛbhus who are identified as scientists attaining Devapada by their astonishing researches or as the Sun's rays or the genii of the seasons. ṚV. 1.161.13. states-Ṛbhus awakened from their sleep and rest for 12 days ask, "Agohya! who is that awakened us? It is the hound that awakned you, (replies the Sun). They observed the beginning of the year[41]. Agohya (unhidden) is the Sun. Three seasons make a year. This verse of Dīrghatamas Aucithya suggests the vernal equinox coinciding with the dog-star. Prof. Ludwig translates the word "Abhogayam" in ṚV. 1.110.2.,[42] which the Ṛbhus are said to desire before reaching the house of the Sun, as indicating an inclination (bend) of the ecliptic with the equator. Indra kills Namuchi, a demon by means of foam of water at the junction of the day and the night-[43] ṚV. 10.73.7. & 8.14.13. The foam is that of Milky way and the junction is that of devayāna and Pitṛāna. The seers of the Ṛgveda were fully ware of the heavenly scenario such as total solar eclipse (RV. 5.40.), auspicious junction of Tiṣya constellation with Jupiter (Bṛhaspati)-Tai. Br. 3.1.1.5., revolution of the planet venus as in ṚV. 10.123.; the name Śatabhiṣak (meaning 100 physicians of Varuna) for Śatatarka nakṣatra, the deity of which is Varuṇa; references to constellations Maghā (Aghā), Phalguni (Arjuni), Revati, Citrā, Punarvasu etc. Some scholars

(Westerners, Indians) of the Vedic literature adhere to the notions of primitive humanity from the accounts of the savages in Āfrica or Islands of the Pacific. It is recommended that they imbibe the ample evidence supplied by the Ṛgvedic hymns to give up a priori notions of the primitive humanity and to banish the cobwebs of doubts and deep-rooted prejudice about the Vedic civilisation. ṚV. 10.86 hymn is about Vṛṣākapi, and contains 23 verses. The format is that of a dialogue between Vṛṣkapi, Indra, Indrani, and Vṛṣkapayi. The scholors differ in assigning the verses of the hymn to the different speakers of the dialogue. Riddles are often found in the Vedic literature and require proper perspective and the intelligence to expose the hidden meaning. They have puzzled Sanskrit scholars like Sāyaṇa and Yāskācārya. Lokamanya Tilak has translated the hymn verse by verse. The gist of the hymn as told in "The Orion" is - According to Bṛhaddevatā 2. 9-10. Vṛṣkapi represents the setting Sun and Vṛṣākapayi the twilight. When the vernal equinox is near the dog-star, the Mṛgaśiras will head the list of nakṣatras. The Orion (p. 171-197) tells us Vṛṣākapi is the Sun at the autumnal equinox and the acronycal rising of the Mṛgaśiras signalled the cessation of the sacrifices. During the 6 months of Pitṛiyāna (autumnal equinox to vernal equinox) the Sun's course is in the Southern hemisphere. The cessation of the sacrificial, ceremonies angers Indrāṇi who intends to cut the head of Mṛga and sets a hound at his ear. Indra supports Vṛṣkapi's actions and by his intercession Indrāṇi is conciliated and she exclaims that she has not decapitated him but some other

animal. At the end of his course in the Southern hemisphere, the Sun rises at the vernal equinox but the constellation Mṛgaśiras is no longer visible. The Sun receives welcome at the Northern abode of Indra and the sacrificial ceremonies recommence. The last verse 23 remains unexplained. Sāyaṇa's translation of this verse[44] is- "O arrow! the mortal named Paraśu (female antelope) gave birth to 20 (offsprings) together. Let her whose belly was big be happy. Indra is in the upper portion of the earth. "The twenty are the stars of the nakṣatras along the 240 degrees of the ecliptic course of the Sun from the autumnal equinox to the summer solstice that is the northern apogee of the Sun's traverse and the abode of Indra. The Paraśu (female antelope) is the acronycal rising of the Mṛgaśiras nakṣatras and its belly was full with 20 stars which she delivered when the Sun arrives at the abode of Indra. The arrow indicates the path of the Sun's course along the nakṣatras on the ecliptic. During the course of the Sun to the abode of Indra, the Mṛgaśiras nakṣatras becomes invisible hjence the Paraśu is wished happiness and bed adieu. Sāyaṇa translates 'Mānavī as Manu's daughter but it indicates personification of the Mṛgaśiras nakṣatras in the mortal form as female antelope. Ṛgvedic references to Punarvasu asterism :- our measurement of time is directly based upto the changes in the positions of the heavenly bodies and it is by far the best method to determine the antiquity. Ṛgveda has preserved the records when the Indian Āryans, ancient Iranians and Hellenic Āryans lived together and had common background and myths. The correlative pairs of the

nakṣatras namely Aṣiwini-Puṣya; Kṛttikā-Maghā; Mṛgaśiras-Phalguni; Punarvasu-Citrā depend entirely on the precession of the equinoxes. The presiding deity of Punarvasu is Aditi, mother of Ādityas, as mentioned in Tai. Saṅ. 6.1.5.1. and Ait. Br. 1.7. which relates a story that the sacrifice went away from Gods who then were unable to perform any further ceremonies of the sacrificial rituals. Aditi, mother of Gods, helped them to find the proper commencement of the sacrifices. This means before this time the sacrifices were performed at random and with Aditi's help the proper commencement and the ending of the sacrificial rituals came into vogue. In the Vājasaneyī Saṅ. 4.19. Aditi is called double headed (Ubhayataḥ Śīrṣṇi) that is two proper terminations of the rituals. According to the sacrificial terminology, the fourth day before the central day of the annual Satra is named Abhijit day. In the Sūryasiddhānta the longitude of Punarvasu is 93^0 and that of Abhijit is 266^0 40'. When the vernal equinox coincides with Punarvasu, Abhijit is 6^0 behind the autumnal equionox. Abhijit is far awy from the ecliptic hence has no place in the list of 27 nakṣatras. Aditi and 27 nakṣatras are the dughters of Dakṣa. Aditi heads all nakṣatras, governed by the Moon. The asterism of Prajāpati's figure is described in the Tai. Br. 1.5.2.2.[45] denoting Citrā as his head, Swāti as his heart, his hands hasta, this Viśākhā, feet Anurādhā. The zodiacal sign Meṣa-Aries is Prajāpati's head. The Citrā full moon once commenced the year and such a calender was in vogue in the primitive days. Citrā is a common word

meaning 'bright' and occurs many times in the Ṛgveda. But as a constellation, Citrā in feminine gender is seldom found in Ṛgveda. The verse ṚV. 10.19.1. of Cyavana Bhārgava speaks of Revati as, "Return, do not go further, stay with us O Revati! Agni-Soma, Punarvasu hold our wealth for us."[46] This is the only time Punarvasu is mentioned in Ṛgveda. The constellatons Revati and Punarvasu are 90 degrees apart, hence the winter solstice in Revati and the vernal equinox in Punarvasu would have occured together. Agni and Soma represent the Sun and the Moon respectively. With the helical rising at the vernal equinox, Punarvasu heads the list of the nakṣatras. This would have happened from about 6000 B.C. - 5000 B.C. The RV hymn 10.85 verses 13, 18, and 19 mention :- "The cows are presented in Aghā (Maghā) and she (Suryā) is wed in Arjuni (Phalguni)"[47] and "The Sun and the Moon in close succession go east and west by their own power. Like playing children the move around the sacrifice. One views the whole world and the other ordaining the seasons is born again. Being born ever new; ensign of the days he moves at the front of the dawn and ordains the portions (paths) of Gods. The Moon extends our lives. "In this passage separate traverses along the ecliptic of the Sun and the Moon and winter solstice in Phalguni full moon are clearly noted. Hermann Jacobi (1893), a renowned German scholar of the vedic literature noted above heavenly positions and conclusively assigned 4000 B.C.-2500B.C. period to Ṛgveda. This reading is confirmed in Tai. Saṅ.

mentioning Phalguni full Moon, as the beginning of the year. Unfortunately Jacobi's more famous compatriot and fellow Vedic researcher Mr. Max Müller ignored the clear astronomical and calendrical allusions in the Ṛgveda, instead he favoured quite arbitrarily the date 1500 B.C.! His hypothesis was primarily based on Indo-European documents from the Middle East and the erroneous Āryan invasion model. Müller's views were vehemently criticised by many eminent scholars of his day but the prevailed mainly because the Eurocentric opinion at that time did not want India as central to world civilisation. Surprisingly many contemporary and recent books on history still echo the outdated views of Max Müller. though astronomical method does not give exact dates of the Vedic hymns it is scientific and superior to the linguistic method based on idiosyncrasies. Division of the maṇḍalas of Ṛgveda as the maṇḍalas 2 to 8 are more ancient than maṇḍalas 1, 9, and 10 is based on linguistic method and is similarly arbitrary, for instance the hymns of Dīrghatamas Auchithya occuring in first maṇḍala cannot be called less ancient than those of Vāmadev Gotama in the fourth maṇḍala.

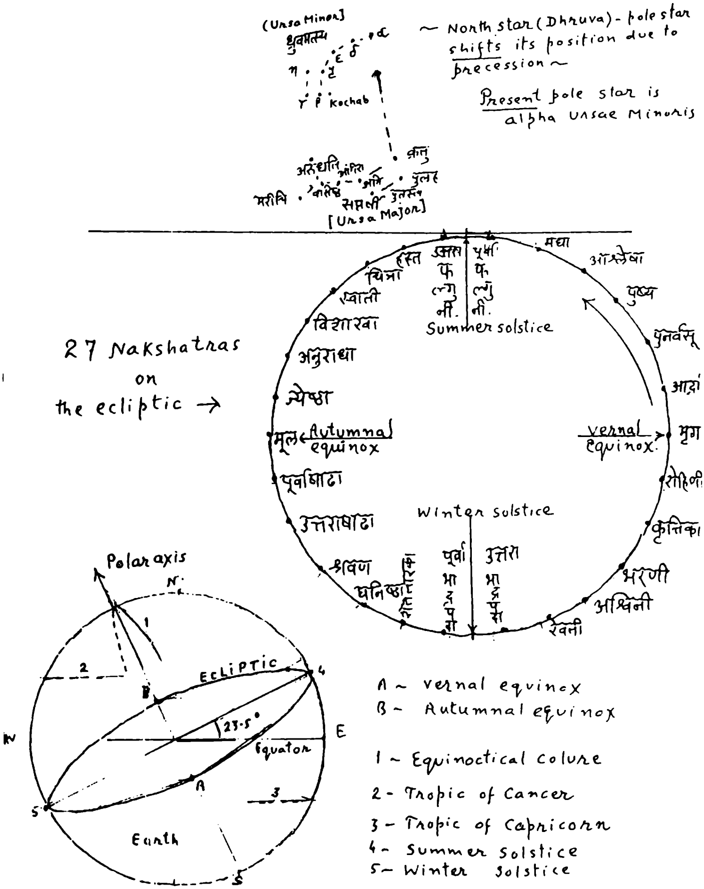
Choronology of the Vedic literature :-

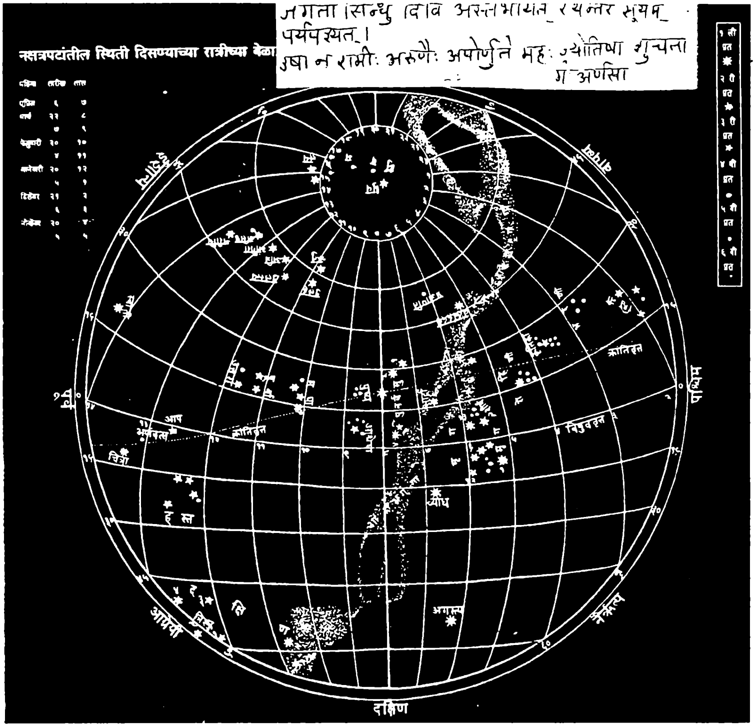
In 1859 Prof. F. Max Müller depending upon his knowledge of language studies and the archeological documents of the Middle East postulated four periods of the Vedic literature as Mantra, Chandas, Brāhamaṇa, and Sūtra and to each he alloted intervening period of 200 years. Thus the Sūtra period 600-800 B.C. and the latest date for

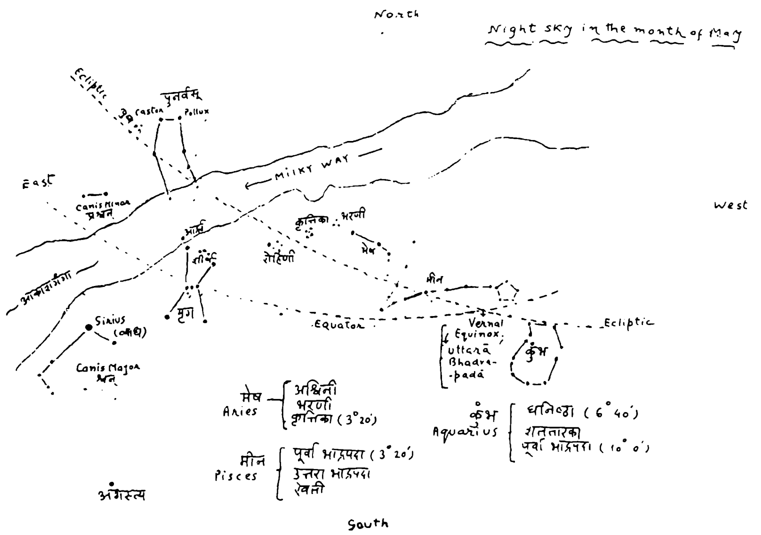
composition of Vedic hymns 1200 B.C. This simply means Ṛgveda hymns were composed latter than the great war in the Mahābhārata! He was not sure of the hypothesis that the change in the pattern of the language occurs every 200 years. Dr. Haug, scholar of Chinese literature assigned 500 years instead of Max Müller's 200 years, and dated Vedic period as 2400-2000 B.C. The above assignments of periods had no astronomical basis. In 1893, Hermann Jacobi and Lokamanya Tilak independently of each other assigned 4000B.C. period to Ṛgveda. Mr. S. B. Dixit assigned 2400 B.C. to Śatapatha Br. from reference in Śatapatha Br. 2.1.2. and the period of Vedāṅga Jyotiṣa as 1450 B.C. According to the fifth verse in the same book. Lokamanya Tilak in "The Orion" assigns following periods to the Vedic literature :-

1) Aditi (preorion) period-6000B.C.-4000 B.C. during which the sacrificial formulae, epithets and feats of deities were in vogue. Hymns were unfinished. there is no mention of this period in Greek or Parsi literature. (2) Orion period-4000 B.C. - 2500 B.C. Many Sūktas and legends were formed. The verses were sung. Hellenic Āryans, Iranian Āryans left the original home. It must be remembered however that the Ṛgveda Saṅhitā was compiled later by Maharṣi Vyāsa and by that time some hymns or verses were lost or incomprehensible hence omitted. (3) Kṛttikā period - 2500 B.C.-1400 B.C. during which time four Veda Saṅhitās and Brāhmaṇas came into use or were composed. Certain words and their exact meaning were not properly understood. Sacrificial rituals againned prominence and the priestly class

attained importance. Chinese borrowed Indian nakṣatra system. (4) Pre-Buddhist period-1400 B.C.-500 B. C. Kalpasūtras, Certain philosophical systems, Vedāṅga Jyotīṣa, Nirukta etc. came into use. The






North
Night sky in the month of May
Ecliptic
Castor
Pollux
East
Canis Minor
MILKY WAY
West
Sirius
Canis Major
Equator
Vernal Equinox, uttarā Bhadra-padā
Ecliptic
Aries
Aquarius
Pisces
South

beginning of the year was made from new Moon to new Moon instead of full Moon to full Moon Hence seasons fell back by fortnight, due to recession rainy season started in Bhādrapada (Manu Smṛti 4.95). The above chronology based on astronomical grounds has been accepted and not questioned so far.

Foot Notes :

1. गूळ्हं सूर्यं तमसा अपव्रतेन तुरीयेण ब्रह्मणा अविन्दत् अत्रि : ।
2. बृहस्पतिः प्रथमं जायमानः तिष्यं नक्षत्रं प्रादुर्बभूव ।
3. अयं वेनः चोदयत् पृश्निगर्भा ज्योतिर्जरायुः रजसः विभाने । इमपां सङ्गमे सूर्यस्य शिशुं न विप्राः मतिभिः रिहन्ति ॥
4. सः वा एष न कदाचनास्तं एति न उदेति- सः वा एष न कदाचन विम्रोचति ।
5. मीनमेषयोः मेषवृषभयोः वसन्तः ।
6. केशी विषस्य पात्रेण यत् रुद्रेण अपिबत् सह ।
7. कालः अश्वः वहति सप्तरश्मिः सहस्राक्षः अजरा भूरिरेताः । तमारोहन्ति कवयः विपश्चितः तस्य चक्रा भुवनानि विश्वा ॥
8. ये देवासः दिवि एकादशस्थ पृथिव्यां अधि एकादशस्थ अप्सुक्षितः महिना एकादशस्थ ते देवासः यज्ञं इमं जुषध्वम् ॥
9. यां पर्यस्तमियादभ्युदियादिति सा तिथिः । The Tithi is that where the Moon sets and rises.

9a. त्रीणी शता त्री सहस्त्राणि अग्निं त्रिंशत् च देवाः नव च असर्पयन् ।

10. चत्वारि शृङ्गाः त्रयो अस्य पादा द्वे शीर्षे सप्तहस्तासो अस्य । त्रिधा बद्धो वृषभो रोरवीति महो देवो मर्त्यां अविवेश ॥
11. सूर्यः सोमः महीपुत्रः सोमपुत्रः बृहस्पतिः । शुक्रः शनैश्चरः राहुः केतुः च एते ग्रहाः स्मृताः ॥
12. स्कम्भः दाधार धावापृथिवी उभे इमे स्कम्भः दाधारोर्वन्तरिक्षम् । स्कम्भः दाधार प्रदिशः षडुर्वी स्कम्भः इदं भवनं आविवेश ॥
13. द्वे स्तुती अश्रुणवम् पितृणां अहं देवानं उत मर्त्यानाम् । ताभ्यां इदं विश्वं एजत् समेति यत् अन्तरा पितरं मातरं च ॥
14. एषः देवपथः ब्रह्मपथः । - मासेभ्यः पितृलोकम् ।
15. वसन्तो ग्रीष्मो वर्षा । ते देवा ऋतवः शरद्धेमन्तः शिशिरस्ते पितरो यः एष आपूर्यते अर्धमास स देवा यः अपक्षीयते स पितरः -

16. पूर्वां अनु प्र दिशं पार्थिवानां ऋतून् प्रशासत् विदधौ अनुष्टु ।
17. मधुश्च माधवश्च शुक्रश्च शुचिश्च नभश्च नभस्यश्चेषश्चोर्जश्च सहश्च सहस्यश्च तपश्च तपस्यश्चोपयाम गृहीतोऽसि सँर्पोस्यँस्पत्याय त्वा ॥
18. मुखं वा एतत् ऋतूनाम् । यत् वसन्तः ।
तस्य ते (संवत्सरस्य) वसंतः शिरः । ग्रीष्मो दक्षिणः पक्षः -
19. एकाष्टकायां दीक्षेरन् - एषा वै संवत्सरस्य पत्नी - तस्य सा निर्या यत् अपः अनभिनन्दतः अभ्यवयन्ति । विच्छिन्नं वा-अन्तनामानौ ऋतू भवतः । फाल्गुने दीक्षेरन्-मुखं वा एतत् संवत्सरस्य यत् चित्रापूर्णमासः तस्य न निर्या अस्ति - चतुरहे पुरस्तात् पौर्णमास्याः दीक्षेरन् । पशवः ओषधयः अनूत्तिष्ठन्ति - ।
20. आग्रहायण्यश्वत्थाट्टक् । विभाषा फाल्गुनीश्रवणकार्तिकीचैत्रीभ्यः ।
21. एता ह वै प्राच्यै दिशो न च्यवन्ते सर्वाणि ह वा अन्यानि नक्षत्राणि प्राच्यै दिशाश्च्यवन्ते । - तस्मात् कृत्तिकासु आदधीत ॥
22. मुखं वा एतत् नक्षत्राणाम् । यत् कृत्तिकाः । देवगृहा वै नक्षत्राणि । - कृत्तिकाः प्रथमम् । विशाखे उत्तमम् । तानि देवनक्षत्राणि । अनुराधा : प्रथमं । अपभरणीः उत्तमं । तानि यमनक्षत्राणि । यानि देवनक्षत्राणि तानि दक्षिणेन परियन्ति । यानि यमनक्षत्राणि तानि उत्तरेण ॥
23. प्रपद्येते श्रविष्ठादौ सूर्याचंद्रमसावुदक् । सार्पार्धे दक्षिणार्कस्तु माघश्रावणयोः सदा ॥
24. यदा माघस्य शुक्लस्य प्रतिपद्युत्तरायणम् । सहोदयं श्राविष्ठाभिः सोमार्कौ प्रतिपद्यतः ॥
25. अमूँस लोकं नक्षते । त् नक्षत्राणां नक्षत्रत्वम् । यानि वा इमानि पृथिव्याः चित्राणि । तानि नक्षत्राणि ॥
26. अभि श्यावं न कृशनेभिः अश्वं नक्षत्रेभिः पितरो द्यामपिंशन् ।
27. चतुःत्रिशंत् वाजिनः देवबन्धोः वङ्क्रीः अश्वस्य स्वधितिः समेति ।
अच्छिद्रा गात्रा वयुना कृणोत परुः परुः अनुघुष्य वि शस्त ॥
28. आ रोदसी अपृणात् आ उत मध्यं पञ्च देवान् ऋतुशः सप्तसप्त ।
चतुः त्रिंशता पुरुधा विचष्टे सरूपेण ज्योतिषा विव्रतेन ॥
29. द्वौ द्वौ माघादिमासौ स्यादृतुःस्तैरयनं त्रिभिः ।
30. एषा ह संवत्सरस्य प्रथमा रात्रिः यत् फाल्गुनि पौर्णमासी ।
31. मुखं वा एतत् संवत्सरस्य यत् फाल्गुनी पौर्णमासी ॥
32. मुखं उत्तरे फल्गुन्यौ पुच्छं पूर्वे । तद्यथा प्रवृत्तस्यान्तौ समेतौ स्याताम् । एवं एतत् संवत्सरस्यांतौ समेतौ भवतः ॥
33. प्रजापतिः वै स्वां दुहितिर अभ्यध्याद्दिवामित्यन्य आहुरुषसमित्यन्ये तामृश्यो भूत्वारोहितं भूतामभ्यैत् तं देवा अपश्यन्नकृतं वै प्रजापतिः करोतीति तमैछन्य

एनमारिष्यत्येतमन्योन्यस्मिन्नाविदंस्तेषां या एव घोरतमास्तन्व आसंस्तौ एकधा समभरंस्ता संभृता एव देवोभवत्तदस्यै तद्भूतवन्नाम भवति वै स योस्यैतदेवन्नाम वेद तं देवा अब्रुवन्नयं वै प्रजापतिरकृतमकरिमं विध्येति सतथेत्यब्रवीत्स वै वरं वृणा इति वृणीष्वेति स एतमेव वरमवृणीत पशुनामाधिपत्यं तदस्यैतत्पशुमन्नाम पशुमान् भवति योस्यैतदेवं नाम वेद तमभ्यायत्यविध्यत्स विद्ध ऊर्ध्वं उदप्रपत तमेतं मृग इत्याचक्षति पर उ एष मृगव्याधः स उ एष स या रोहित् सा रोहिणी यो एवेषुस्त्रिकांडासो एवेषु त्रिकांडा तद्वा इदं प्रजापतेरेतात्सिक्तमधावन्तत् सरोभवत् ॥

34. पिता यत् स्वां दुहितरं अधिष्कन् क्ष्मया रेतः संजग्मानः नि सिञ्चत्। स्वाध्यः अजमयन् ब्रह्म देवाः वास्तोष्पतिं तपां निरतक्षन् ॥ ऋः. १०.६१.७

35. वृतस्य यत् बद्बधानस्य रोदसी मदे सुतस्य शवसा अभिनत् शिरः

36. मृगशीर्षं मृगशिरः तस्मिन् एव आग्रहायणी इन्वकाः तत् शिरोदेशे तारकाः निवसन्ति याः ॥

37. यौ ते श्वानौ यम रक्षितारौ चतुरक्षौ पथिरक्षी नृचक्षसौ ।
अति द्रव सारमेयौ श्वानौ चतुरक्षौ शबलौ साधुना पथा ।

38. अप्सु ते जन्म दिवि ते सधस्थं समुद्रे अन्तः महिमा पृथिव्याम् ।
शुनः दिव्यस्य यन्माहः तेन ते हविषा विधेम ॥

39. देवीं नावं स्वरित्रां अनागसां अस्त्रवन्तीं आरुहेम स्वस्तये ।

40. शुनासीरौ इमां वाचं जुषेथां यत् दिवि चक्रथुः पयः । तेन इमां उपसिञ्चताम् ।

41. सुषुप्वांस ऋभवः तत् अपृच्छत अगोह्य क इदं नो अबूबुधत् ।
श्वानं बस्तो बोधयितारं अब्रवीत् संवत्सर इदं अद्या व्यख्यत ॥

42. आभोगयं प्र यत् इच्छन्तः ऐतन अपाका प्राञ्चः मम के चित् आपयः । सौधन्वनासः चरितस्य भूमना अगच्छत सवितुः दाशुषः गृहम् ॥

43. अपा फेनेन नमुचेः शिर इन्द्र उदवर्तयः ।

44. पर्शुर्ह नाम मानवी साकं ससूर विंशतिम् । भद्रं भल त्यस्या अभूद्यस्या उदरं आमयत् विश्वस्मात् इन्द्र उत्तरः ॥

45. या वै नक्षत्रीयं प्रजापतिं वेद । - हस्त एवास्य हस्तः । चित्रा शिरः निष्ट्या हृदयम् । ऊरू विशाखे । प्रतिष्ठानुराधाः । एष वै नक्षत्रीयः प्रजापतिः । - मेष शिरः अथ वदनं वृषभः विधातुः -

46. निवर्तध्वं मा अनुगात् अस्मान् सिषक्त रेवतीः । अग्निषोमापुनर्वसू अस्मे धारयतं रयिम् ॥

47. अघासु हन्यन्ते गावः अर्जुन्योः परि ऊह्यते ।
पूर्वापरं चरतः मायया एतौ शिशू क्रीळन्तौ परियातः अध्वरम् ।
विश्वानि अन्यः भुवना अभिचष्टे ऋतून् अन्यः विदधत् जायते पुनः ।.
नवोनवो भवति जायमानः अह्नाम् केतुः उषसाम् एति अग्रम् ।

भागं देवेभ्यः विदधाति आयन् प्र चन्द्रमाः तिरते दीर्घम् आयुः ॥

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Section 2

The Arctic Home in the Vedas and the Aryan Problem

The Arctic Home in the Vedas in the light of Siberian Archaeology

Shubhangana Atre

'The Arctic Home' as a hypothesis:

In 1903, when Lokamanya Tilak wrote *The Arctic Home in the Vedas*, the available archaeological data that could throw light on the Palaeolithic habitation in the Arctic and sub-Arctic regions were certainly inadequate. One is amazed, however, by the perfect analytical methodology he used, as well as the sound conjectures built by him. No branch of knowledge, relevant to the problem of the original home of the Aryans was left untouched in his attempt to reach a plausible solution. With information made available by the excavations in the Arctic and the sub-Arctic regions it is now very clear that Tilak with his extraordinary scholarship, fortified with his uncanny insight, was right in his conjecture regarding the existence of early man in those regions.

His conclusions may or may not be accepted by the academic world in unison but that does not diminish in any way the extraordinary insight and scientific deductions reached by him. There will never be any dearth of new theories and innovative answers to meet the challenge posed by the so-called Aryan Problem. The journey of academic research in the field is continuously bringing forth new possibilities and

probabilities without being able to do away with the older theories. With this picture in mind, it would serve us well if we recall Tilak's message when he quoted Andrew Lang, saying, "*Our little systems have their day, or their hour: as knowledge advances they pass into the history of the efforts of pioneers.*" (1903: p. vii)

The 'Palaeolithic Age' and the premises in Tilak's Theory of the Arctic Home in Vedas:

1) We must look for the cradle of human race in the Arctic regions.

2) Palaeolithic Age was probably dated to an interglacial period. (p.12)

3) An interglacial period was accompanied by depression of land and milder and congenial climate, which made even the Arctic regions habitable. (p.22, 35)

4) Neolithic races (5000 BC) represented the primitive Aryans in Europe. (p.16)

5) They must have gone there from some other part of the globe. (p.16)

6) Aryans were autochthonous neither in Europe nor in Central Asia, but had their original home somewhere near the North Pole in the Paleolithic times. (p.17)

Tilak's premises were bound to be viewed skeptically in the light of the general belief that humans could not have occupied the Arctic and the sub-Arctic regions during the glacial period. His theory is frequently discussed by Western and Indian scholars but so far has not found wide acceptance. Some

scholars like Kalpana Sahni of Jawaharlal Nehru University of Delhi have even suggested (2003) that Tilak adopted W. Warren's work, *Paradise Found: The Cradle of the Human Races at North Pole*. This is absolutely unwarranted as Tilak has himself mentioned Warren's work, and made it clear that his intentions were not "so comprehensive" as that of Warren. He intended, "to confine himself only to the Vedic literature and show that if we read some of the passages in the Vedas, which have hitherto been considered incomprehensible, in the light of the new scientific discoveries we are forced to the conclusion that the home of the ancestors of the Vedic people was somehow near the North Pole before the glacial epoch". (1903: p.60)

The debate that addresses the so-called 'Aryan Problem' seems to be perpetually refreshing itself with newer evidence and newer viewpoints that are being poured into the arena. It would be apt at this stage that at least we have an overview of the archaeological work in the Arctic and the sub-Arctic Russia and discuss some of the premises regarding the prehistory of the Aryans in that light. This note is an attempt to do so.

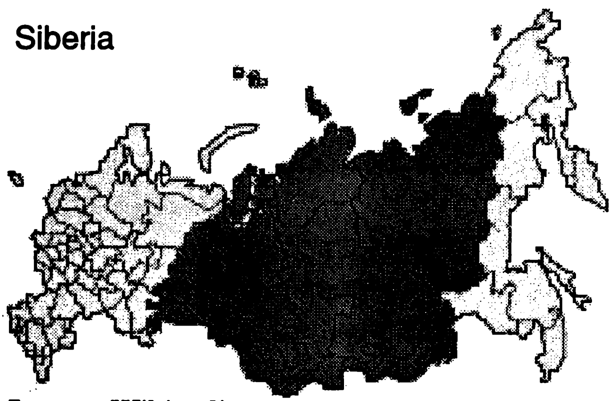
Archaeological and anthropological research indicates that the aboriginal people in the Circumpolar North are most probably genetically linked with the Palaeolithic people who originally inhabited the temperate zones of the Old World. The discussions regarding their original home are not concluded yet but there is a general consensus that around some 45-

35,000 years ago, modern humans had spread from Africa across the southern parts of Europe, Russia and Asia.

Ice Cover in the Arctic Region

Scientists now tell us that it was during the Last Ice Age that the "North" was much closer to the Equator than it is now. Scandinavia, northern Europe, the Ural Mountains, parts of Siberia and the Russian Far East, Canada, the northern part of the US, Greenland and Iceland were then covered by Ice sheets, with its peripheral region characterized by a belt of dry, cold, treeless steppe-tundra. Large herds of huge animals, including mammoth, woolly rhinoceros, horse, and bison roamed in this region. Humans adapted to this eco-environment and learnt to hunt such large mammals. They spread in the area between Central Europe and Ukraine, and also in Central Asia and along the Pacific coast.

Siberia



Source : Wikipedia

Siberia spreads from the Ural Mountains to the Pacific Ocean. It also shares a border with China and Mongolia. It was generally

believed to be uninhabitable, especially the northern parts of Siberia, because of extreme weather conditions. Perhaps that is the reason Siberia got its name meaning the "Sleeping Land" in the Tatar language. Information regarding the early human habitations in Siberia, its palaeolithic cultures and industries, was scarcely available earlier.

Archaeologists had been speculating the existence of early human habitations in this area but did not have enough evidence to support it. Archaeological research in this area has now changed the picture.

Geographically Siberia is divided into four regions.

1) The West Siberian Plain, abutting on the Ural Mountains, is drained by the Ob′ and Yenisey Rivers. Extensive tracts of swamplands characterize it.

2) The plains and the central plateau east of the Yenisey River comprise East Siberia.

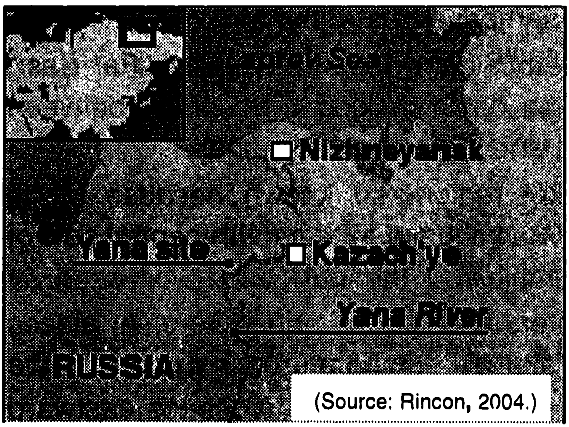
3) Northeastern Siberia (i.e., the Russian Far East) include the Lena basin making a boundary between Central Siberia and the mountain ranges.

4) The Baikal region, so known because of its spread around Baikal Lake in the south-central part of Siberia is the smallest of the four.

Siberian winters are lengthy and severe. At places like Sakha (Yakutia), temperatures may reach the lowest of -68^0 C (-90^0 F). As one proceeds eastward the climate gets harsher and precipitation decreases. Siberia is also divided across (from west to east) into different vegetation and faunal zones. In the north it is tundra. The central parts are characterized by swampy forests. Southwestern and Southern Siberia are

marked by forest-steppe and steppe.

The earliest of the Stone Age sites are mainly concentrated in the upper reaches of the major Siberian rivers and their southernmost tributaries, and in the region on the southeast side of Lake Baikal. Archaeologists working in Siberia along the rivers Yenisey, Angara, and Lena have uncovered ample evidence to confirm the existence of Lower, Middle and Upper Palaeolithic communities datable to 35,000 - 25,000 years BP or even earlier. These people hunted large animals like mammoth, reindeer, bison, horse, woolly rhinoceros and other arctic mammals. (Derev'anko, 1998). These rivers originate in the high altitudes of the southern Siberian mountains and flow downwards to north. Hence 'upper reaches' denotes the southern area.



(Source: Rincon, 2004.)

In January 2004 a New discovery of a blade tool industry dating to more than 30,000 years BP in the northern-most part of Siberia, on the Yana River was announced (Pitulko, et.al. 2004). It changed the worldview of the Arctic archaeology. The Yana River valley is about 500 kilometres above the Arctic Circle (close to the Bering

Land bridge). The Yana basin is also known as the "cold pole" of Russia, where the lowest temperatures of the Northern Hemisphere are recorded. During winter, in the central part of the basin average temperatures drop as low as -45^0 C (-49^0 F). Instances of temperature dropping to -71^0 C (-96^{0}F) are also known, while in the mountains it is believed that temperatures have even reached -82^0 C (-116^0 F). The Yana River remains frozen completely for 70-110 days, and partly frozen for 220 days of the year.

The site in the Yana River area is the first known human habitation in the Arctic. Vladimir Pitulko, Russian archaeologist, the excavator of the Yana site confirms that humans occupied the freezing lands high above the Arctic Circle during the last Ice Age. Artefacts from Yana in northern Siberia prove that the estimates regarding the antiquity of human presence in the Arctic are pushed back at least by 16,000 years. (Earlier it was dated to 15,000 years BP, the beginning of the post-Glacial period).




Bone & Stone Tools from Yana Site (Source: Rincon, 2004.)

The numerous artefacts and animal bones coming from the frozen deposits from an ancient terrace on the Yana River indicate that *Homo sapiens* who depended on hunting big animals inhabited the area. The animal bones found at the site belong to mammoth, bison, horse and other Arctic mammals. Their tool kit included spear "foreshafts" and stone tools. It is inferred that Yana people moved in the region around 30,000 years ago.

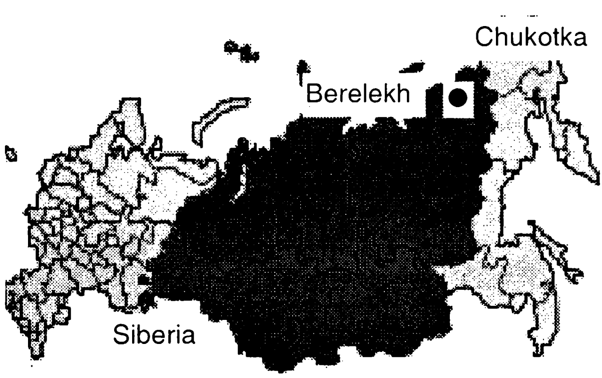
The tool kits and subsistence strategy of hunting big animals is proof enough of the adaptability of the Yana people which sustained them in the harsh, high-altitude, Late Pleistocene environment. The stone tools at the Yana site indicate superior technique. The artefacts found at the site are said to date to a time when the climate was in the process of cooling down, turning open meadows into icy tundra (Rincon, 2004).

Beside the site of Yana there are several other sites where arefacts dating to about 35,000 years, providing an evidence of a thriving art tradition have been recovered. "In fact the finds include the oldest currently known sculpture in the world, an animal head carved on a rhinoceros bone from the site Tolbaga. Best known among the Siberian sites of portable Ice Age art are Buret' and Mal'ta, on the Angara River and one of its tributaries respectively. They are famous for the many human figurines of mammoth ivory they yielded, and for the beads, pendants and other ornaments fashioned from the same material. Other sites of portable Ice Age art are located around lake Baykal, also elsewhere on the Angara and on the Yenisey and

Ob Rivers. There is even one site in far northern Siberia, on the Arctic Sea: Berelekh, the northernmost known Ice Age settlement site in the world. It produced a juvenile mammoth tusk baring the engraving of a mammoth." (Chakravarti & Bednarik 1997: 102 - 105)

It is generally agreed that the deglaciation of the globe began around 15,000 BC introducing climatic changes resulting into the post-glacial faunal and floral profiles of various regions. These changes were bound to reflect in the archaeological record too. Around 20,000 BC the Microlithic tradition (looked upon as the transition to Mesolithic persisting till 8,000 BC) developed in Siberia though old lithic traditions also survived till 15,000 BC.

By 13,000 BC the Microlithic tradition spread all over Siberia. A thousand years later the same tradition seems to have spread all over northeast Asia. Among other artefacts are drilled stone pendants; one of them was of green jadeite, four mammoth tusk knives, a spear point and two scrapers made out of mammoth bones.



The site of Berelekh, which is commonly known as the "mammoth cemetery", was

excavated by Yuri Mochanov (1996) in the early 1970's. C-14 dates indicate the age of the site to be13,000 to 13,500 years BP. Berelekh is the site on the Arctic coast of Siberia (located in the delta region of the River Indigirka) with mixed tool assemblages. It includes bifaces, blades and wedge-shaped cores. As the excavator suggests the site may represent the final stages of the Dyuktai culture of northern Siberia.

In addition, the genetic studies are said to indicate that the native Chukchi, people of the far northeast Siberian region called Chukotka, are linked to Upper Paleolithic or Ice Age people of Eurasia. People from southern parts of Siberia migrated to the northern parts. The archaeological findings so far show that the concentration of Stone Age sites was in the cold, dry regions of southern Siberia from the Altai Mountains to the area around Lake Baikal. The Altai Mountains are the most northerly mountains in Central Asia, separating the hills and plains of western Siberia from dry basins to the south. As an eco-region of high altitudes it has an arctic character, with extremely cold winter temperatures and vegetation typical of the northern tundra.

People are said to have begun to migrate from here around 30,000 B.C. or little earlier from this area to northward regions of Eastern Europe, Central Asia and Mongolia.

What did trigger these migrations?

Sites like Sunghir in the European Russia may have answers to this question. Sunghir is 192 Km from Vladimir City, (56^0 11" NL and 40^0 30" EL). It was

excavated under Supervision of Otto N. Bader. The site has revealed cultural strata corresponding to different stages of Valdai Ice Age of Late Pleistocene. Around 32,000 years ago (interstadial climate phase) the climate began to turn milder and the permafrost began to give way for more stabilized surface and soil formation (known as Bryansk soil).

The geological sequence at the site is divided in four periods based on the Periods of Landscape Development: (Source: *The Sunghir archaeological site*, online bulletin published by *The Institute of Bioarchaeology*, Russia.)

1. Pre-Bryansk (up to 32000 Years Ago)

2. Bryansk (32,000-24,000 Years Ago): The Cultural strata of the Sunghir Settlement begin with the formation of Bryansk Soil.

3. The Time of Maximum Temperature Fall (23,000 - 17,000 Years Ago)

4. Latest phase of Valdai Ice Age (16,000 - 12.000 Years Ago).

Radio carbon dates obtained from Sunghir : 24,430+/- 400 and 25,500+/- 200 Years. Thus, it may be noted that the Sunghir site corresponds to the earliest of several phases of Upper Palaeolithic development (30,000-22,000 years ago). The favourable changes in climate, beginning of soil formation and stabilization of the surface made it possible for the man to migrate and colonize the regions in the far North.

Sunghir represents a typical case of adaptation to periglacial environment. These people hunted reindeer, mammoth and horse. They buried their dead

with elaborate rituals as witnessed by carefully arranged beads in large quantities and other material found in these burials. Their artefacts such as bone needles and bead decorations on the clothing "allowed archaeologists to reconstruct the shirts, jackets, trousers and moccasins that these people wore." (Watson, 2005: 42)

There is also evidence that indicates the eastward spread of Upper Palaeolithic culture known as 'Diuktai Culture', which began around 32,000 B.C. The type site of this culture, Diuktai cave is on the Alden River and the lithic assemblage of this culture includes bifacial, leaf shaped projectile points along with blades and cores. This feature is supposed to be indicative of a transition from Upper Palaeolithic to Mesolithic. The migrations are thought to be the result of the Diuktai people following the big game animals like mammoth, woolly rhinoceros, bison, horse, musk-ox and reindeer, from eastern Siberia to the Russian Far East.

With all said and done, it has to be borne in mind that linguistic barriers and other technicalities have proved to be the major factors adversely affecting research into the Pleistocene in Siberia. The information available so far may claimed to be inadequate to create a clear picture of the Siberian Palaeolithic. Yet it is evident enough that Siberia was occupied by the Early Man during the Ice Age and he was well adapted to the cold climate.

Tilak's premises in the light of new discoveries in the Arctic Siberia

- Palaeolithic Age probably Inter-Glacial. (p.12)

● An interglacial period was accompanied by depression of land and milder and congenial climate which made even the Arctic regions habitable... (the climate being) mild and temperate in the Inter-Glacial period, even as far as the polar regions. (p.25-35)

The archaeological research in the sub Arctic region does provide us with the evidence for the presence of Early Man (Upper Palaeolithic - Neanderthal/Modern Man) from 45,000 to 40,000 BP, going back to the period of last Ice Age.

Now we know that even the Arctic area (Yana Site) was inhabited during the last Ice Age. It is obvious that when Tilak thought of interglacial period he had in mind a climatic phase in the Arctic and the sub Arctic regions that was favourable for human occupation. From 32,000 to 30,000 B.C. during the interstadial phase (not Interglacial) we have positive evidence of population movements from southern Siberia to northern parts, even beyond the Arctic Circle because of the settling of milder climate and surface stabilization.

Here we must note that the difference between interglacial and interstadial is more of a technical nature regarding the duration and extent of climatic changes and it need not be considered pertinent as far as its providing the impetus to population movement.

Thus the two premises cited here stand largely justified. What we need to note with emphasis is that Tilak had anticipated only 6-8,000 years of antiquity of the human settlements in the Arctic region but the site of Yana is at least four times older.

It is now generally accepted, based on the mitochondrial DNA (mtDNA) studies that the modern human populations all over the world originate from a common African ancestor (the Mitochondrial Eve), who is believed to have lived about 150,000 years ago. Obviously, the notion of the 'Arctic' as the cradle of the human race has to be dropped but with his extraordinary insight we may see that Tilak had almost foreseen what the modern research has confirmed now, that is, "the remote antiquity of human existence in the Arctic".

However questions regarding the dispersal of humans from Africa to other places, the course of their migrations with respect to its episodic cycles within specific spatial and temporal frame are not yet fully answered. The Vedic people were one of the Indo-European speaking people and the movements of Indo-European speaking people are supposed to have taken place during the Neolithic period, which is much recent (8,000 B.C. and later) compared to the period of dispersal of early humans from Africa.

Migrations during the Prehistoric and Proto historic times

1) Neolithic Discontinuity Theory (NDT):

The genetic research now seems to confirm that migrations from the Middle East in prehistoric and historical times contributed significantly to the composition of modern European population. According to some scholars, Neolithic farmers migrating from Anatolia and their admixture with local hunter-gatherers make for this composition.

Similar genetic studies also indicate the Uralic-speaking people and pastoral nomads dispersing from a region north of the Caucasus and Black Sea. According to Marija Gimbutas (1977, 1980) this is the area of origin of Indo-European speakers. She propounded the theory that the Indo-European speaking, horse-riding warrior pastoralists descended on Europe in the Copper Age (4th Millennium BC). They were the authors of the Kurgan (burial mounds) culture found in the steppe area of Ukraine, who from the steppe area further proceeded to Southern Eastern Europe. The same people in the 3rd Millennium, evolved into the so-called Battle-axe people. As they were the conquerors, the Indo-European languages prevailed over the non-Indo-European local languages.

Renfrew (1987) has concluded that the early farmers in the Middle East were the proto Indo-Europeans. They introduced the Indo-European languages in southern and central Europe, and from there to other areas of Europe, along with farming techniques as well.

This is known as the Neolithic Discontinuity Theory that presumes a total distancing between the Upper Palaeolithic/Mesolithic and the Neolithic, which is not adequately corroborated by available archaeological data.

2) Palaeolithic Continuity Theory (PCT):

The evidence of the first arrival of the Neolithic people from the Middle East comes from the areas of southern Europe that are linguistically areas

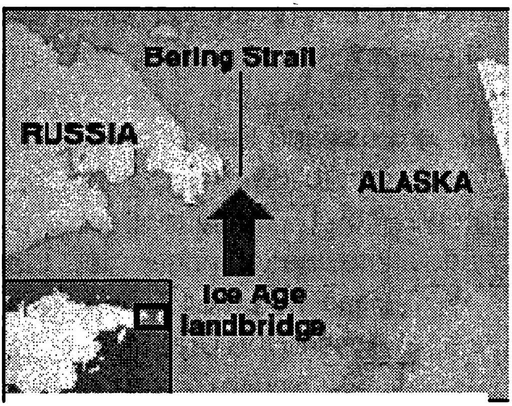
predominated by non-Indo-European traits, indicating that autochthonous Upper Palaeolithic/Mesolithic people evolved into the Neolithic. European Neolithic is thus supposed to be essentially a local development. This conclusion is supported by genetic research demonstrating that the European genetic stock is traced predominantly to the Paleolithic. This has brought forth the theory the Palaeolithic Continuity Theory (PCT) that counters the Neolithic Discontinuity Theory (NDT).

Tilak's premises in the light of the Neolithic Discontinuity Theory (NDT) and the Palaeolithic Continuity Theory (PCT)

- Neolithic races (5000 BC) represented the primitive Aryans in Europe (p.16)
- They must have gone there from some other part of the globe. (p.16)
- Aryans were autochthonous neither in Europe nor in Central Asia, but had their original home somewhere near the North Pole in the Paleolithic times. (p.17)

Scholars favouring the Palaeolithic Continuity Theory (PCT), like Mario Alinei (1996) argue that a proper analysis of the the Proto-Indo European vocabulary does prove the existence of the earliest strata belonging to the Palaeolithic and also indicates that the proto-Indo Europeans branched off sometime between the Upper Palaeolithic and Mesolithic. This branching off is probably responsible for the seemingly wider differentiation among different groups of proto Indo-European speaking groups that becomes apparent during the Neolithic.

Tilak's premises put against the Palaeolithic Continuity Theory (PCT) and the Neolithic Discontinuity Theory (NDT) may appear to weigh somewhat indecisively. The assumption of the European Aryans as being represented by the Neolithic seems to be getting negated gradually but the assumption of their not being indigenous to Europe continues to hold the ground.



(Source: Rincon, 2004.)

The people who reached the Arctic and the sub-Arctic regions were essentially hunters of the big animals. These people are supposed to have spread out to western regions in the pursuance of these animals. 'Horse' gained extraordinary importance in later times.

Aryans spreading out from somewhere near the North Pole (Arctic and sub Arctic fact that regions) in the Palaeolithic past, is actually the core of the entire argument by Tilak. In that respect, his argument gets fully corroborated by the established fact that around 32,000B.C. People from more southerly Siberian regions migrated to the Arctic and the sub Arctic regions.

In every Ice Age much of the water on earth got locked up resulting into expansive ice sheets. As a

result the Arctic region has remained covered by ice over the past 2 million years. It is said that in the last Ice Age as the result of this ice cover sea levels all over the globe had dropped to the extent of 100 - 150 meters exposing the floor of the Bering Sea. It created a land connection between Alaska and Siberia, that is known as Beringia. It has been confirmed that the geographic and climatic conditions of Beringia had been somewhat moderate before the onset of the warmer period of the early Holocene (marked by deglatiation), in which the early humans could survive. Beringia was a low-lying grassland then teeming with megafauna like the mammoth, followed by palaeolithic hunters. It is now agreed upon by many that some of these people descended into the Americas and the Scandinavian parts of Europe via the Bering land bridge. Few, perhaps also crossed the Ural Mountains toward the West.

If the horse-riding Indo-European speaking people who are supposed to have suddenly taken over the Neolithic Europe and also the central and more eastern parts of Asia, and if they were the descendants of the people who stayed in the Arctic/sub-Arctic regions for a long span, then it is of natural course that they carried a substratum of the memories and usages in their consciousness from their Palaeolithic times as argued by the scholars in favour of PCT.

It may be safely assumed that among the memories and usages forming a substratum of the Indo-European Consciousness, the memories of the long

arctic nights and the dawn or *Aurora Borealis,* were bound to stand out in a bold relief. The unique characteristics of a phenomenon like *Aurora Borealis* are not likely to be easily forgotten. It is not surprising if the ancients continued to weave a web of their imagination around it creating the 'Dawn Goddess' and her stories. Thus, Tilak's foresight in attempting to establish the polar character of the Vedic deities, especially Ushas proves to be consistent with the modern archaeological and anthropological research.

It should also be noted that despite of his focus on the Aryans, Tilak did never contend for them as the only people residing in the Polar region. The Aryan problem is still far from reaching a conclusive solution, but we may end this note by pointing out that Tilak despite the limitations of the information available to him could predict the Palaeolithic continuity as part of the Aryan subconscious quite accurately.

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The Arctic Home in the Vedas and the Aryan Problem

B. B. Chaubey

Veda is the most ancient literature of the world, produced by people known as Aryans. But when was this literature produced, who were the Aryans and where was their original homeland all this had been matter of controversy among the Western scholars when they first started their study into the ancient Indian literature, particularly the Vedas. Up to the middle of 19th century the myths and traditions were the only materials available for the study of the pre-historic man. Various attempts were made to systematise these myths to explain them rationally and see if they shed any light on the early history of man. Greece and Egypt were thought to be the most ancient cultures of the world, but in the case of former the historic period goes back to 1000 B.C. and in the case of latter the contemporaneous records, recently unearthed from ancient tombs and monuments, carry back its history upto 5000 B.C. But in either case the historic period, the oldest limit of which may be taken as 5000 or 6000 BC, is preceded by myths and tradition, which eventually fed away into inpenetrable darkness. It was felt by almost all unprejudiced scholars that myths and traditions cannot help us in knowing the history of man unless some other means is adopted. The new system *viz.,* comparative

philology was evolved as a means of understanding the mythological problems. The study of Vedic literature and classical Sanskrit by Western scholars, thus gradually effected a revolution in their ideas regarding the history and culture of man in ancient time.

Dr. Schroeder in his work on *'Prehistoric Antiquities of Aryan people'* gave an exhaustive summary of the conclusion arrived at by the method of comparative philology regarding the primitive culture of the Aryan people. It was believed that the original home of the Aryan race was some where in Central Asia and that the Vedic hymns which were supposed to have been composed after the separation of the Indian Aryans from the common stock contained the ideas of only that branch of the Aryan race which lived in the temperate zone.

This conclusion of the philologist school of scholars was thrown away by the scientific researches of the latter half of the nineteenth century. From hundreds of stone and bronze implements found buried in various places in Europe, the archaeologists have now established the chronological sequence of the Iron, The Bronze and the Stone age in times preceding the historic period. The works of German scholars like Posche and Penka freely challanged the Asiatic theory regrarding the original home of the Aryan race. Canon Taylor in his *'Origin of the Aryans'* called their work 'mainly a destructive work' and advised that 'hasty philological deductions require to be systematically checked by the conclusions of prehistoric archaeology, craniology, anthropology,

geology and common sense'. Dr. Warren in his book *'Paradise Found'* or *'Cradle of Human race at the North Pole'* interpreted many ancient myths and legends in the light of modern scientific discoveries and came to the conclusion that the original home of the whole human race must the sought for in region near the North pole. Tilak persued his research on this very line, but confined himself mainly to the Vedic literature, though occusionally referring to Greek and Iranian evidence to show similarity between them. He compared a large number of Vedic passages which has hitherto been considered incomprehensible, in the light of the new scientific discoveries, and reached the conclusion that the homeland of the ancestors of the Vedic people was somewhere near the North Pole before the last glacial epoch. He interpreted many Vedic mantras, myths and legends in the light of the astronomical interpretation.

In 1889 while studying Śrīmad Bhagavadgītā Tilak came across a referemce 'मासानां मार्गशीर्षोऽहम्'. He was struck with his reference and went on pondering on the real purport and significance of this statement of Lord Kṛṣṇa. This sentence really inspired him to go deep into knowing the history of past. This very sentence led him to inquire into the primitive Vedic calendar. He worked hard for four years and published the result of his researches in 1893 in a book-form.[1] Tilak found that the theories propounded by western scholars, do not go beyond the upper limit of 2400 BC. They had admitted the antequity of Egyptian civilisation to 5000 BC. It means the Egyptian culture was older than the Aryan civilisation.

Tilak on the basis of Vedic references proved that the date of Ṛgveda could not be later than 4000 BC. He based this arguments on astronomical references found in the Vedic texts. He collected many astronomical references in his support. He also quoted many legends from the Vedic texts in support of his conclusions. Before Tilak started his researches into the antiquities of the Vedas, Prof. Max. Müller had fixed the date of the Vedas. He divided the Vedic literature into four periods--the Chandas, Mantras, Brāhmaṇa and Sūtra, in this very order on the ground that each period presuppose the preceding one. The Sutra period was the lowest limit of the Vedic literature. It was composed at a period prior to, if not the origin, at least to the spreading and ascendancy of the Buddhism in the fourth century B.C. By assigning two hundred years for each period Max Müller had arrived at about 1200 BC as the latest date at which the Vedic hymns have been composed. Tilak called this method of ascertaining the age of the Vedas as the literary of the linguistic method, which according to him, was based on arbitrary calculations. Granting that the Vedic literature admits of a fourfold division, the question of the duration of each period is still involved in uncertainty and considering the fact that each period might run into and overlap the order to a certain extent, it becomes extremely difficult to assign even the minimum chronological limits to the different periods. Even Max Müller himself adimtted that the limit of 200 years could be assigned to each period only under the supposition that during the early periods of history the growth of the human mind was

more luxuriant than in later times. Prof. Haug, following the same method fixed the very commencement of the Vedic literature between 2400-2000 BC by assigning about 500 years to each period on the analogy of similar period in the Chinese literature. Prof. Whitney could not go beyond 2000 BC as the upper limit of the period of Vedic hymns. Prof. Haug and Wilson thought that a period of 500 years was not to long for the purpose. In a paper submitted to the Ninth Oriental Congress Mr. Dhruva examined the whole Vedic literature with a view to ascertain its chronology and he arrived at a conclusion that the duration assigned to several periods of the Vedic literarture by Prof. Max Müller was too short and that without making any guesses at numbers of years or centuries.

Looking into the incompetancy of literary method to ascertain the date of Vedic literature, Tilak applied a new method called astronomical method to fix the accurate period of Vedic literature. Inspired by the statement 'मासानां मार्गशीर्षोऽहम्', he began to search out the astronomical references in the Vedic literature. To his great pleasure, he found that the Saṁhitās, the Brāhmaṇas and the Sūtras contain numerous allusions and references to astronomical facts, enabling him to accertain from them the age of the oldest literary relic of the Aryan race. It may be pointed out that before Tilak some scholars had already attempted to arrive at a conclusion by using some astronomical methods. But all such references belonged to the later period of Sanskrit literature in which Greek influence was perceptible in all its

mathematical works. Tilak saw that the different methods of astronomical calculations given in these works were not able to correctly interpret the astronomical references found in Vedic texts. Therefore, he based his arguments on the references found in Vedic texts and reached at the following results.[2]

1. The oldest period in the Aryan civilisation may be called the Aditi or the pre-Orion period which may roughly be assigned from 6000 BC to 4000 BC. It was a period when the fininshed hymns do not seem to have been known and half prose and half poetical Nivids or sacrifical formula, giving the principal names, epithets, and feats of the diety invoked were probably in use. The Greeks and the Parsis have retained no traditions of this period, for the simple reason that they carried with them only the calender which was in force when they left the common home, while the Indian Aryans have preserved all the traditions with a super religious fidelity and scrupulousness.
2. The next comes the Orion-period which is roughly extended from 4000 BC to 2500 BC from the time when the vernal equinox was in asterism of *Ārdrā* to the time when it receded to the asterism of the Kṛttikās. This is the most important period in the history of the Āryan civilization. A good many Sūktas (*e.g.* that of Vṛṣākapi which contains a record of the beginning of the year where the legend was first conceived), were sung at this time and several

legends were either formed a new or developed from the older ones. The Greeks and the Parsis appear to have left the common home during the latter part of this period as they have retained most of these legends and even attributes of the constellation of Mṛgaśiras, otherwise called agrayāṇi, Orion or the Pauryeni. No confirmatory evidence about the Kṛttikā period is found in the RV or in the Greek and Parsis legends. This was pre-eminently the peirod of the hymns.

3. The next comes the Kṛttikā-period which commences with the vernal equinox in asterism of the Kṛttikā and extends upto the period recorded in Vedāṇga Jyotiṣa, *i.e.* from 2500 BC to 1400 BC. It was the period of the Taittirīya Saṁhitā and several of the Brāhmaṇa. By this time the hymns of the RV had already become antique and unintelligible and the Brahmavādins indudged in speculations.
4. The fourth and the last period of the old Sanskrit literature extend from 1400 to 500 BC or to the birth and rise of the Buddhism. This is called Sūtra period.

These results, arrived at by Tilak on the basis of astronomical references in Vedic texts, are great contributions to Vedic studies as these have established the antiquity of Vedic culture over the cultures of Greek, Egypt and China. Secondly, the upper limit of the date of composition of Vedic hymn, as fixed by Western scholars as 2400 BC was thrown away and now the antiquity of Vedas has been proved on the basis of astronomical evidences and

accepted by every one. This credit goes to Tilak.

After determining the dates of composition of entire Vedic literature in four periods, *i.e.* Aditi period (6000-4000 BC). Mṛgaśiras period (4000 BC-2500 BC), Kṛittikā period (2500-1400 BC) and Sūtra period (1400-500 BC) Tilak moved to another important problem about the original home of the Aryans on the basis of references made in Vedic texts. His main object was to trace form positive evidences contained in the Vedic literature the home of the Vedic and other Aryan races long before they settled in Europe or on the banks of the Oxus , the Jaxartes, or the Indus. He published the results of his studies in 1903 in a book form.[3]

Tilak holds that in the Pleistocene period there was great elevation and submergence of land accompanied by violent changes in the climate over the whole surface of the globe. The distribution of land and water about the pole during the Inter Glacial period must have been different from what it is at present. A different configuration of land and water prevailed about the North Pole during the Inter Glaicial period. The Palaeolithic man along with other Quarternary animals freely ranged over whole of the Arctic Regions in those times. But supposing that an Arctic continent, with an equable and pleasant climate existed during the Inter Glacial period and that the Palaeolithic man ranged freely over it, it does not follow that the ancestors of Aryan race lived in the Arctic region during these days unless it is proved by new archaeological discoveries, or failing them try to examine the ancient traditions and beliefs of the race

incorporated in such admitedly oldest Aryan books as the Vedas and Avesta and see if they justify as in predicting the Inter Glacial existence of Aryan people. Tilak holds that it is not unlikely that we may find traces of primeval Polar home in Vedic texts. Therefore, it is necessary to examine the Vedas from this new point of view. But before doing it, it was necessary to ascertain such peculiar characteristics of the polar or Arctic regions as are not found elsewhere on the surface of the globe, so that we many search them in the Vedic tradition.

Tilak summarises the Polar and circum-Polar characteristics which he has discussed in detail-

I. The Polar Characteristics

1. The Sun rises in the South.
2. The stars do not rise and set, but revolve or spin round and round in horizontal planes, completing one round in 24 hours. The Northern celestical hemisphere is alone overhead and visible during the whole year and the Southern or the lower celestial world is always invisible.
3. The year consists only of one long day and one long night of six months each.
4. There is only one morning and one evening, or the Sun rises and sets only once in a year, but the twilight, whether of the morning or of the evening, last continously for about two months or 60 periods of 24 hours each. the ruddy light of the morning or the evening twilight, is not again confirned to a particular part of the horizon (Eastern or Western) as with us, but moves like the stars at the place round and round along the

horzon like a potter's wheel, completing the round in every 24 hours. These rounds of the morning light continue to take place until the orb of the Sun comes above the horizon; and then the Sun follows the same course for six months *i.e.* move, without setting round and round the observer, completing one round every 24 hours. (pp. 54-56)

II. Circum-Polar Characteristic

1. The Sun will *always be to the South* of the zenith of the observer; but as this happens even in the case of an observer stationed in the temperate zone, it cannot be regarded as a special characteristic.
2. A large number of stars are *circum-polar,* that is, they are above the horizon during the entire period of their revolution and hence always visible. The remaining stars rise and set, as in the temperate zone, but revolve in more oblique circles.
3. The *year* is made up of the *three parts :* (i) one long continuous night, occurring at the time of the winter solstice, and lasting for a period, grteater than 24 hours and less than six months, according to the latitude of the place; (ii) *one long continuous day* to match, occuring at the time of the summer solstic; and (iii) *a succession of ordinary days and night* during the rest of the year, a nycthemeron, or a day and a night together, never exceeding a period of 24 hours. The day, after the long continuous night, is at first shorter than the night, but, it goes on increasing

until it develops into the long continuous day, the night is, at first, shorter than the day, but, in its turn, it begins to gain over the day, until the commencement of the long continuous night, with which the year ends.

4. The dawn, at the close of the long continuous night, lasts for several days, but its duration and magnificence is proportionally less than at the North Pole, according to the latitude of the place. For places within a few degrees of the North Pole, the phenomenon of reveloving morning lights will still be observable during the greater part of the duration of the dawn. The other dawns, *viz.* those between ordinary days and nights, will, like the dawns in the temperate one, only last for a few hours. The Sun, when he is above the horizon during the continuous day, will be seen revolving, without setting, round the observer, as at the Pole, but in oblique and not horizontal circles, and during the long night he will be entirely below the horizon; while during their rest of the year he will rise and set, remaining above the horizon for a part of 24 hours, varying according to the position of the Sun in the ecliptic.

Tilak applies these tests on Vedic texts

Indra is said to 'seperately up-hold up by his power heaven and earth, as the two wheels of the chariot are held by the axle'[4]. The same idea occurs in the other places also. Sometimes the sky is described as being supported even without a pole testifying

thereby to the great power or might of Indra.[5] In Stanza-RV X. 89.2, Indra is identified with Sūrya and he is described as turning the widest expanse like the wheels of a chariot.[6] Tilak says, it is clear that the verse in question refers to the revolution of the sky an compares to the motion of a chariot-wheel. On the basis of these passages, Tilak expressed his view that 'Now the heaven in the temperate and the tropical regions may be described in moving like a wheel from east to west and then back again to the east through the latter half of this circuit is not visible to the observer. But we cannot certainly speak of tropical sky as being supported on a pole for the simple reason that the North Pole, which must be the point of support in such case, will not be sufficiently near the Zenith in the tropical or temperate zone. If we therefore combine the two statements that the heavens are supported as on a pole and that they move like a wheel we may safely infer that the motion referred to is such a motion of the celestic al hemisphere as can be witnessed only by an observer at the North Pole. (p.61)

In RV I.24.10 the constellation of Ursa Major (*Ṛkṣāḥ*) is described as being placed 'high' *uccāḥ*)[7] and as this can refer only to the altitude of the constellation, it follows that it must then have been over the head of the observer which is possible only in the circumpolar regions. Tilak also remarks that this passage speaks of appearance (not rising) of the seven Bears at night and their disappearance (not setting) during the day showing that the constellation

was circumpolar at the place of the observer.

Taking another characteristic of the Polar regions, viz., a day and night of six months each Tilak quotes Tai. Ār. 17.1. in which mount Meru is described as the seat of 7 Ādityas while the 8th Āditya called Kaśyap is further described as communicating light to the seven Ādityas and himself perpetually illumining the great mountain.[8] In the Tai. Br. III.9.22.1) we meet with a passage which clearly, says : 'That which is a year is but single day of Gods.[9] Here it is clearly said that a year of the mortal is said to be but a day of the gods.

On the above Vedic pasage Tilak observes, 'Later researches have, however, forced on me the conclusion that the tradition, represented by this passage, indicates the existence of a polar home in old days, and I have set forth in sequel the evidence on which, I have come to the above conclusion'.[10]

Tilak found parallel passages in the works of Herodotus and the Sacred books of the Parsis. 'There existed a people who slept for six months' (Herodotus IV.2). **'Tae cha ayara mainyante yat yare'**=[11] They regard as a day what is a year. This reference in Vendidad is 'but a paraphrase of the statement in the Tai. Br. and this context in Parsis scriptures removes all possible doubts regarding the Polar character of the statement. The latter part of the second Fargard wherein this passage occurs, contains a discourse between Ahura Mazda and Yima. Ahura Mazda Warns Yim, the first King of men, of the approach of a dire winter which is to destroy every living creature by covering the land with a thick sheet of ice and

advices Yima to build a *'Vara'* or an enclosure to preserve the seeds of every kind of animals and plants. The meeting is said to have taken place in the *Airyana Vaejo*, or the paradise of the Iranians. The *Vara* or the enclosure, as advised by Ahura Mazda, is accordingly prepared and Yima asked Ahura Mazda, 'O Maker of the material world, thou Holy One, what lights are there to give light in the *Vara* which Yima made.' Ahura Mazda answered : 'There are uncreated lights and the created lights. There the stars, the Moon and the Sun are only once (a year) seen to rise and set, and a year seems only a day.'[12] According to Tilak, 'this passage. is important from various standpoints. 'First of all it tells us that the *Airyan Vaejo,* or the original home of the Iranians, was a place which was rendered unhabitable by glaciation; and secondly that in this original home the sun rose and set only once in the year; and that the year was like a day of the inhabitants of the place. Tilak says that the early rising and setting of the sun is possible only at the North pole and the mention of this characteristic leaves no room for doubt that the *Vara* and the *Airyana Vaejo* were both located in the Arctic or circumpolar regions, and the passage in the Taittirīya Brāhmaṇa also refers to the polar year.[13]

Tilak searched out many other passages even in the Ṛgveda which go to corroborate this statement in a remarkable way by referring to other Polar characteristics. He say that be oldest Vedic year appears to have been divided only into two portions, the *Devayāna* and the *Pitṛyāna,* originally

corresponding with the *Uttarāyaṇa* and the *Dakṣināyana,* or the day and night of Gods. The word *Devayāna* occurs several times in the RV and denotes the path of the Gods. In RV I.72.7 Agni is said to be cognizant of the *Devayāna*·[14] In RV I.183.6 Ṛṣi says : 'We have O Aśvins, reached the end of darkness; now come to us by the *Devayāna* path.[15] In RV VII. 76.2 it is said that the *Devayāna* path has become visible to me... The banner of the Dawn has appeared in the East.[16] According to Tilak these passages clearly indicate that the road of *Devayāna* commenced at the rise of the Dawn or after the end of the darkness; and that it was the road by which Agni, Aśvins, Uṣas, Sūrya and other matutinal deities travelled during their heavenly course.

The path of Pitṛs, or the path of Death, has been described in RV X.18.1. as Pitṛyāna as reverse of *Devayāna.*[17] In RV X.88.15 the Ṛṣi says that he has heard only of two path one of the Devas and the other of the Pitṛs.[18] Tilak says that if the *Devayāna* commenced with the Dawn we must suppose that the *Pitṛyāna* commenced with the advent of darkness. Now, if the *Devayāna* and *Pitṛyāna* were only synonymous with ordinary day and night, says there was obisously no propriety in stating that these were the only two paths or roads known to the ancient Ṛṣis, and they could not have been described as consisting of three seasons each beginning with the spring[19]. Accortding to Tilak, it is very probable that the *Devayāna* and the *Pitṛyāna* originally represented a two-fold division of the ear one of continuous light and

the other of continuous darkness as at the North Pole; and that though it was not suited to the later home of the Vedic people, it was retained, because it was an established and recognised fact in the language, like the seven Suns, or the seven horses of a single Sun. About the tenacity of this interpretation Tilak says : '.... if we interpret the twofold division of the *Devayāna* and the *Pitṛyāna* in this way, it fully corroborates the statement in the Tai. Br. that a year was but a day of Gods.[20] The references to the 'Path of God's occur even in the Parsi scriptures. In the Farvardin Yasht, paras 56, 57 the Fravashis, which correspond with the Pitṛs in the Vedic literature, are said to have shown to the Sun and the Moon the path made by Mazda, the way made by the Gods' along which the Fravashis themselves are described as growing. The Sun and the Moon are again said to have stood for a long time in the same place without moving forwards through the oppression of the Devas (Vedic Asuras, or the demons of darkness) before the Fravashis showed 'the path of Mazda' to these two luminaries. On this similarily in two traditions Tilak drew the conclusion that 'The path of Mazda' commenced like the *Devayāna* road when the Sun was set free from the clutches of the demons of darkness. In other words, it represnted the period of the year when the Sun was above the horizon at the place where the ancestors of the Indo-Iranian lived in ancient days.' (p. 69)

In the descriptions of Vedic Uṣas, Tilak sees many characteristic features of North Pole. The 'long continuous Dawn with revolving splendours is the

special characteristic of the North Pole. He collected and interpreted a good number of verses addressed to Uṣas in this light. He also collected some allied passages from the Brāhmaṇas indicating the long duration of Uṣas, a Polar character of the Uṣas. The Ait. Br. (IV.7) prescribes a long recitation of not less than a thousand verses to be recited by the Hotṛ priest and the time for reciting it is after mid-night when 'the darkness of the night is about to be relieved by the light of the dawn'[21]. The Śastra is so long that the Hotṛ who has to recite it, is directed to refresh himself by drinking before hand melted butter after sacrificing thrice a little of it.[22] 'He ought to eat ghee before he commences repeating' says the Air. Br. On this statement of Ait. Br. Tilak drew the conclusion that 'It is evident that if such a recitation has to be finished before the rising of the Sun, either the Hotṛ must commence his task soon after mid-night when it is dark, or the duration of the dawn must then have been sufficiently long to enable the priest to finish the recitation in time after commencing to recite it on the first appearance of light on the horizon as directed. The first supposition is out of the question, as it is expressly laid down that the Śastra is not to be recited until the darkness of the night is relieved by the light. So, between the first appearance of light and the rise of the Sun there must have been in those days, time enough to recite the laudatory song of not less than thousand verses' 'nay, in the Taittirīya Saṁhitā (II.1.10.3) we are told' says Tilak, that sometimes the recitation of the Śastra, though commenced at the

proper time, ended long before sunrise, and in that case, the Saṅhitā requires that a certain animal sacrifice should be performed.[23] Āśvalayāna directs that in such a care the recitation should be continuous upto sun-rise by reciting other hymns[24] while Āpastamba after mentioning the sacrifice referred to in the Saṅhitā , adds that all the ten Maṇḍalas of the Ṛgveda may be recited, if necessary, in such a case.[25] It is evident from this says Tilak, that the actual rising of the sub above, the horizon was a phenomenon after delayed beyond expectation in those days.

After making a thorogh study of the Uṣas Sūktas of the RV and 15 verses of the Tai. Saṅ. (IV.3.11) together with their Brāhmaṇas (TS.V.3.4.7), Tilak arrived at the following results :[26]

1. The Ṛgvedic Dawn was so long that several days elapsed between the first appearance of light on the horizon and the Sunrise which followed it (RV VII.76.3) or many dawns (RV II.28.9) appeared one after another before they ripened into Sunrise.
2. The Dawn was addressed in plural number not hororifically, not as representing the consecutive dawns of the year, but because it was made up of thirty parts (RV I.123.8; VI.596; TS IV3.11.6).
3. Many dawns lived in the same place acted harmoniously and never quarelled with each other (RV IV.51.7-9; VII 76.5; AV VII.22.2)
4. The thirty parts of the dawn were continuous and inseparable, forming 'a closely gathered band' or

'a group of dawns' (RV I.152.3; Tai. Br. II.5.5.5; AV VII.22.2)

5. These thirty dawns, or thirty parts of one dawn revolved round like a wheel, reaching the same goal every day, each dawn or part following it own destined course (RV I.1.2.3.8.9; III.61.3; TS IV.3.11.6).

According to Tilak, these characteristics are possessed only by the dawn at North Pole. The last or the fifth especially is to be found only in lands very near the North Pole, and not everywhere in the Arctic region.

When we talk of the Aryan problem on the basis of researches made by Tilak in his 'Arctic Home in the Vedas' following facts about the Aryans come to our light-

(i) Aryan is the most ancient rase of the human being the existence of which is known to us from the Vedas.

(ii) In the very beginning of its existence this race lived in the Arctic region near North Pole for a considerable period in the pre-Glacial period.

(iii) Aryans living at Polar or circum-Polar regions are the ancestors of the Vedic Aryans.

(iv) No sign of any literary activity of this period is available to us.

(v) Ṛgvedic seers where acquainted with the climatic conditions of the arctic region, the homeland of their ancestors.

(vi) In the past-Glacial periods the descendants of the Aryans are found staying somewhere in Central Asia, before 6000 BC.

(vii) About 6000 BC Aryans migrated from central Asia and settled down in the land of seven rivers *i.e.* Sapta Sindhu Pradesh.

Objection to Tilak's Theory

The migration theory, or the 'Aryan's Arctic homeland theory of Tilak was not accepted by most of the scholars. Dr. Narayan Bhavan Rao Pavgee with solid literary, philological, geological and archaeological evidence proved that the Original Homeland of the Aryans from the very beginning had been in the region of River Saraswati. The entire region will called Sapta Sindhu Pradesh, the land called of the seven rivers.[27] According to Pavgee, for a considerable period the Iranians and the other Āryan families remained outside the Sapta Sindhu Pradesh and they had made their colonies in Artic region and lived there as this land was fit for inhabitation at that time. On the basis of a forecast, recorded in the Avesta, the sacred book of the Parsis, that the entire Arctic region would be covered with a snowfall, they had returned back to their original homeland, *i.e.* the Sapta Sindhu Pradesh. the Iranians, too came back to their original place. thus, both were saved from the great disaster.

As to the question whither the Sapta Sindhu Pradesh, or the Arctic Pradesh was the original homeland of the Āryans, Pavgee holds that ample geological evidences are available today providing the Sapta Sindhu Pradesh or Āryāvarta as the most suitable place for inhabitation from the very beginning when started living on the earth. On the basis of

geological history of the earth, it is believed that there was an age when, because of the excess of heat, this earth was not fit for inhabitation for any plant, animal or man. This period is known as *Azoic Age.* According to Dr. Dana 'The Azoic must stand as the first in geological history whether science can point out unquestionably the rocks of that age, or not.[28] When the earth gradually became cool the vegetables grew on it, then animals. The period, when animate being came for the first time, is known as *Palaeozoic Epoch.* Various species of cereatures came into existence in this period. At that time the temperature at North pole was congenial for living.[29] Like the North pole the temperature of the Āryāvarta, was quite congenial for life. To quote Medicot : 'There are some very curious indications to a low temperature having prevailed in Indian area at very ancient Epich.[30] Dr. Pavgee quotes Oldhem, according to whom 'In the extra Peninsular area (of India) we have no need to content ourselves with such indirect evidence as this, for the presence of Palaeozoic rocks has been proved in three distinct areas by their discovery of Cambrian and Sillurian fossils. The most important because most fully studied. Of these, is the salt Range of the Punjab where an extensive series of conformable strata nearly 3000 feet in thickness is divided into five groups.[31] This statement of Oldhem is important when he says : None of the species from this group have been found in other parts of the world as yet..... The general facies of the founa, however, leaves no room for doubt that the beds (of the salt

range of the Punjab) are of Cambrian age and consequently the oldest of India whose age can be determined with an approach to ceretainty.[32]

Pavgee says that when once it has been proved on geological grounds that the life in Āryavārta is most ancient even from the exitstence of life at Arctic region, the existence of life at Sapta Sandhu Pradesh is definitely anterior to the existence of life at Arctic region.[33]

Dr. Sampurnanand, too, has established that the original homeland of the Āryans was in Sapta Sindhu Pradesh.[34]

Nevertheless, Tilak's view has its merits for the comparative study of the Vedic legends, myths and for providing many astronomical calculations to fix the difference period of Vedic literature.

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4. यो अक्षेणेव चक्रिया शचीभिर्विष्वक् तस्तम्भ पृथिवीमुत द्याम्। RV. X. 89.4
5. अवंशे द्यामस्तभायद् बृहन्तमा रोदसी अपृणदन्तरिक्षम्।
   स धारयत् पृथिवीं पप्रथच्च सोमस्य ता मद इन्द्रश्चकार ॥ RV. II.15.2
   स इत्स्वपा भुवनेष्वास य इमे द्यावापथिवी जजान।

उर्वी गभीरे रजसी सुमेके अवंशे घोरः शच्या समैरत् ॥ RV. IV.56.3
6. स सूर्यः पर्युरू वरांस्येन्द्रो ववृत्याद्रथ्येव ।
अतिष्ठन्तमपस्यं न सर्गं कृष्णा तमांसि त्विष्या जघान ॥ RV. IV. 89.2
7. अमी या ऋक्षा निहितास उच्चा नक्तं ददृशे कुहचिद् दिवेयुः । RV. I.24.10
8. Tai. Ār. 1.7.1
9. एकं वा एतद्देवानामहः यत्संवत्सरः । Tai. Br. III.9.22.1
10. Tilak, *Arctic Home in the Vedas,* p. 65
11. Vendidad, Fargard II page 40, Quoted by Tilak. The Arctic...p. 60)
12. See *'Sacred Books of the East'* vol. IV, pp. 15-31.
13. Artic Home, p. 67
14. विद्वाँ आग्ने वयुनानि क्षितीनां व्यानुषक् छुरुधो जीवसे धाः ।
अन्तर्विदाँ अधन्वतो देवयानानतन्द्रो दूतो अभवो हविर्वाट् । RV. I.72.7
15. अतारिष्म तमसस्पारमस्य प्रति वां स्तोमो अश्विनावधायि ।
एह यातं पथिभिर्देवयानैर्विद्यामेषं वृजनं जीरदानुम् ॥ RV. I.183.6
16. प्र मे पन्था देवयाना अदृश्रन्नमर्धन्तो वसुभिरिष्कृतासः ।
अभूदु केतुरुषसः पुरस्तात् प्रतीच्यागाधि हर्म्येभ्यः ॥ RV. VII.76.2
17. परं मृत्यो अनु परेहि पन्थां यस्ते स्व इतरो देवायानात् ।
चक्षुस्मते श्रृण्वते ते ब्रवीमि मा न प्रजां रीरिषो मोत वीरान् ॥ RV. X. 18.1
18. द्वे स्रुती अश्रुवणं पितृणामहं यदन्तरा पितरं मातरं च ॥ RV. X. 88.15
18. वसन्तो ग्रीष्मो वर्षा ते देवा ऋतवः। शरद्धेमन्तः शिशिरस्ते पितो य ए वापूर्यतेऽर्धमासः स देवा योऽपक्षीयत सःपितोऽहरेव देवा रात्रिः पितरः पुनरहः पूर्वाङ्गो देवा अपराह्नः पितरः।... स यत्र उदगावर्तते देवेषु तर्हि भवति देवाँस्तर्ह्यभिगोपायत्यथ यत्र दक्षिणावर्तते पितृषु तर्हि भवतीपितृस्तृँर्ह्यभगोपायाति । SB II.1.3.1-3.
19. एकं वा एतद्देवानामहः यत्संवत्सरः । Tai. Br. III.9.22.1
20. प्रजापतिर्वै सोमाय राज्ञे दुहितं प्रायच्छत् सूर्यां सावित्री तस्मै सर्वे देवा वरा आगच्छंस्तस्या एतत्सहस्त्रं वहतुमन्वाकरोद्यदेतदाश्विनमित्याचक्षतेऽनाश्विनं हैव तद्यदर्वाक् सहस्रं तस्मात्तत्सहस्रं वैव शंसेद् भूयो वाव । प्राश्य घृतं शंसेद् यथा वा इदमनो वा रथो वाऽक्तो वर्तत एवं हैवाक्तो वर्तते । Ait. Br. IV.7
21. प्राशज्यशेषमप उपस्पृशेन्नाचामेद् विज्ञायते देवरथो वा एष यद्धोता नाक्षमद्भिः करवाणीति । AsvSS VI.5.3.
22. पराची वा एतस्मै व्युच्छन्ती, तम पाप्मानं प्र विशति यस्याविश्वने शस्यमाने सूयाङ् नाविर्भवति । सौर्यं बहुरूपमा लभेता गुमेवादित्यं सवेन भागधेयोनोपधावति । Tait.S. II.1.10.3.

23. प्रातरनुवाकन्यायेन तस्यैव समाम्नायस्य सहस्रावममोदेतोः शंसेत्। ĀśvŚḶS VI.5.8
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The Arctic Home Theory : Then and Now

M. K. Dhavalikar

Lokamanya Tilak was not only a great leader but also an aminent Indologist. Among his seminal contributions, the most important is *The Arctic Home in the Vedas (1925)* which was, as he himself said, the sequel to his *Orion* (1972) in which he reconstructed the chronology of Vedic literature on the basis of astronomical evidence. While writing the *Orion*, he came across certain statements in Vedic literature which led him to ponder over the problem of the original habitat of the Aryans; however, he could not find leisure requried for such a serious study in the midst of social and political activities in which he was engaged at that time. But when he was imprisioned for sedition in 1898, he could devote his attention to the problem. It was at this time that Max Müller, the great Vedic scholar, had sent him a copy of the second edition of the Ṛgveda edited by him. It should be noted that Max Müller had great respect for Tilak's scholarship although he did not agree with his theories. Actually the Oxford professor pleaded for leniency for Tilak when the latter was imprisoned (Choudhury 1974 : 373).

The Lokamanya was deeply interested in the edition of the RV. which he received from Max Müller. He was highly impressed by the statement "*Sūryodayāt prāk bahūni ahnāni āsan* (RV. VII, 76), meaning "many days have passed before sunrise". It

was this statement that led him to trace the original homeland of the Aryans in the Arctic region. He began to ponder over the problem and was immersed in thinking about references to the Sun, day, night, dawn and so on. He was very happy when he found the statement that many days have passed before sunrise, implying hereby a very long day and night. This phenomenon occurs only in the Polar region and the only logical conclusion therefore was that the original homeland would have been in the North Pole. Although the climate in the Polar reigon is extremely cold, a few studies had appeared at that time according to which it was mild in the Inter-glacial period when human habitation was possible. This was established geologically and and it was aruged that the original home of the early man must be sought in the Arctic region where the plant and animal life also originated. Hence the early Aryans could have located their settlements there. "There are many passages in the RV which though look upon as obscure and unintelligible, do, when interpreted in the light of recent scientific researches, plainly disclose the Polar attributes of the Vedic deities of the traces of the ancient Arctic calendar (Tilak 1925 : 335).

There is supporting evidence for this contention from the *Avesta* which too points to the location of the original homeland of the Aryans in extreme north. Aryanam Vaejo, the 'Aryan paradise' was situated in the region where the sun shone but once a year, and that was destroyed by heavy snowfall. Airyanam Vaejo was a perfect land with ten months of summer and two months of winter, but Angra Mainyu, a demon

or hostile deity, created a powerful serpant and changed the climate to ten of winter and two months of summer(Ibid : 389). This, according to *Avesta* forced Ahur Mazda to abandon it and migrate to other places. The Fargard section Vendidad in the *Avesta* mentions sixteen different places where Ahur Mazda migrated with his people, but these have been taken to be nothing but just the geographical descriptions whereas others maintain that they mark the route of migration of the Aryans. Tilak justifiably argued that the description in the RV is so graphic that it cannot be regarded as mythical and imaginary, but must be taken "as a relic of the period where the recollection of the colder regions from which the Vedic Aryans migrated, had not yet been entirely forgotten (Ibid : 389).

In fine, two important conclusions follow from the Lokamanya's works.

1. The RV should be assigned to ca. 4500 BC.
2. The original homeland of the Vedic Aryans was located in the North Pole region.

These arguments of the Lokamanya have not been accepted by Indologist who have been divided into two warring groups holding diametrically opposite views, One group, consisting mostely of Western scholars and a few Indian, who can be called 'Invasionists', advocate that the Vedic Aryans came to India from outside, and assign the RV to about 1200 - 1000 BC The other group, comprising mostely of Indian scholars, who can be called 'Indigenists', maintain with equal vehemance that the Aryans were indigenaus to India, and date the RV to 5000 BC or

even earlier. It is therefore clear that Tilak's theory is not acceptable to both these groups.

It is pertinent to state that in the 19th century much of the evidence relating to the Aryan problem was linguistic, and in the 19th century archeaologists joined the fray because of two epoch making archeological discoveries, viz. 1) the inscription at Broghazkoy in north-central Turkey of abount 1360 BC; and 2) the 4000 year old Indus civilization which was revealed in the course of excavations at Harappa and Mohenjodaro. Of these, the former contained the names of gods- Indra, Varuna, Mitra, Nasatya which were the Vedic gods of the Aryans, while the latter was an urban civilization in which horse, the most important animal to the Aryans, was conspicuously absent. These two features supported the views of the Invarionists. But both the schools did not agree with Tilak's views, the former did not accept his dating of RV and the latter, the Indigenists, rejected his view of the Aryans being outsiders. But it may be stated that the recent archaeological evidence to supports Tilak's view.

The evidence comes from the recent excavations at Mehrgarh in Baluchistan (Pakistan). It is an extensive ancient settlement (300 ha) not from the Bolan Pass in the Greater Indus valley, which was excavated on a large scale by the French archaelogist, J. F. Jarrige (1993). The excavation revealed that the site was continuously occupied from 7500 BC to about 2500 BC. The first two cultural phases are neolitic (7500-5000 BC), the first being aceramic whereas

handmade pottery appeared in Period II. The people were already settled agriculturists, cultivating barley, kept cattle and supplemented their diet by huntging - fishing. In the first half of the fifth millennium (Period III) a new group of people appear at the site from the neighbouring Afghanistan and settle there. They introduced many new innovations which include wheel made painted pottery, copper and mother goddess worship. There is evidence for long distance trade with the neighbouring regions. The people lived in large, multi-roomed houses of mud bricks which had hearths and underground ovens *(tandoor)* and storage areas. The burried the dead, sometimes in collective graves. A most noteworthy feature of the human skeletons recovered from the cemetary is the presence of 'Carabelli's cusp' in their dental pattern which is a charactristic of European populations as also of some South Asian people. We are further informed that there is no new element in Indian population between 4500-800 BC. (Kennedy 2000 304). This is a most significanmt observation in as much as it implies that the succeeding cultures till about 800 BC were the creation of the progeny of the same people who arrived at Mehrgarh in 5000 BC.

These people start spreading in the Indus valley and their habitatious have been found at Kille Ghul Mohammed and even at Mohenjodaro, the earliest settlement may have been made by these people. From early fourth millennium the people start spreading into the Sarasvati basin (present Ghaggar) and evolve into the Hakra culture (3800-3200 BC) which later develops into Early Harrappan (3200-2600

BC) and further flowers into Urban Harppan (2600-2000 BC)

The Hakra culture (named after the river Sarasvati in Pakistan) is confined more to the lower basin of the Sarasvati and its remains have been noticed even at Harappa and at Kunal in Haryana, and in Harappan time spreads even in the upper reaches of the river. But the Harappan civilization is on the decline from 2000 BC probably because of drastic change in climate towards aridity, as also the drying up of the Sarasvati because two of its major tributaries; the Sütlaj and the Yamuna, joined the Indus and the latter, the Ganga respectively (Misra 1994). The people therefore naturally abandoned their habitations in the lower Sarasvati and migrated to the upper basin where there is a heavy concentration of Late Harappan sites (Thakran 2000). The Late Harappan was a rural culture which represnts the decadent phase of the prosperous urban Harappan. It survived upto the middle of the second millenium BC, but lingered a little longer in some areas.

The continuous evolution of cultures without any break and without foreign elements from Ca 4500 - 1500 BC, from the Chalcolithic Mehrgarh to the Late Harppan, leads us to find out the chronological slot for the Aryans during the span of these three thousand years. The most significant markers of the Ṛgvedic culture are the horse, and chariot with spoked wheels, Both these are conspicuously absent in the pre-Harappan and even in the urban Harappan cultures. In this context it may be pointed out that there is heated debate on the advent of horse *(Equus*

cabalus) in India for all earlier occurrences of the stead in India, according to experts, do not represent the true horse (Meadow 1997) (Zeuner 1962). However, even if accept for a moment that the Urban Harappans knew horse, its absence in their art, especially on seals, is enigmatic for the simple reason that the animal played a very important role in their religion. This would only show that horse appears in India towards the close of the third millennium when the decline had already set in. The Urban Harappans therefore could not have been the Vedic Aryans.

The only people who have a strong claim to be identified as the Ṛgvedic Aryans are the Late Harappans who lived during Ca 2000-1500 BC. They were a rural folk living in self sufficient villages, in mud structures, cultivating predominantly barley but relying more on cattle keeping; their religion was centred around fire worship. What is more, they had horse and chariot with spoked wheels. Their settlements are found in the Sapta-Sindhu region, the land between the Indus in the west and the Sarasvati in the east. The late Harappan culture is thus characterised by features which are the markers of the Ṛgvedic culture, and they therefore have a better claim to be identified as the poeple of the *Ṛgveda*.

The overlap between the cultures from the chalcolithic (4500-3800 BC) at Mehrgarh upto the Late Harappan (2000-1500 BC) allows us to trace the ancestry of the late Harappans upto the chalcolithic people at Mehrgarh who had come from outside. In this respect the evidence of human skeletal biology is of crucial importance from the standpoint of the Āryan

problem. K.A.R. Kennedy, a renowned biological anthropologist, who has examined the entire gamut of human skeletons found in the sub-continent uptill now, particularly those from the recent large scale excavations at Harappa, has made a very important observation; (Kennedy 2000 : 304).

"Had an Aryan presence been coincident with the decline of the Harappan civilization (with or without Cemetary H), then the period immediately after 2000 BC would have been marked by the introduction of a novel phenotype pattern. There is no evidence of demographic disruptions either before or after the period of Harappan cultural decline. Another recent dichronic of Bronze Age biological interactions across the Indo-Iranian borderlands (inclusive of Bactria and Irarian Seistan, Indus valley and surrounding areas of Southern Central Asia) from the seventh to the first millennium confirmed the result of earlier investigations that a significant biological separation set apart the neolthic and chalcolithic of Mehrgarh and the closely related pre-Harappan inhabitants of the Indus valley during the fifth millennium. This apparent demographic event initiated a period of stable population continuity within the Indus valley bertween 4500-1750 BC although the history of gene flow and a movement of population across the Indo-Iranian borderlands remained episodic, incremental and low level. Large scale population shifts were rare over the span of many thousands of years."

Lokamanya Tilak (1925 : 353 pp) very meticulously employed all the available scientific evidence very juddciously and developed his Arctic Home theory.

Relying on the evidence from the RV and the *Avesta*, he argued that the ancestors of the Vedic Aryans and the Iranians were living in the Polar region which they had to abandon because of heavy snow fall and devastating floods. They therefore began to migrate and reached India about 4500 BC. As discussed above, this contention is supported by the recent archaeological evidence from Mehrgarh which points to the arrival of a new people in the sub-continent around 4500 BC.

The migrations started, according to Tilak, some 10,000 years ago in the post-glacial period. The geologists now tell us that the last glacial came to an end some 15000 years ago, and that there was extremely favourale climate thereafter. Hence the Mesolithic Age is said to be the most favourable period in human history when plant and animal food was plentyfully available and could be obtained with least effort. But again around 10,000 years ago, the climate began to deteriorate towards aridity, and coupled with increased population, the available food supply was not enough. It is this situation which forced man to produce his own food, the stages of the evolution of which have been clearly traced in West Asia. The technique of food production reaches the Indian sub-contenent about 7500 BC when the first settlement took place at Mehrgarh. These earliest inhabitants seem to have abondoned their habitations about 5000 BC and slightly later a new group of people appear at the site, introducing many new innovations. Their successors spread into the Sarasvati basin where they evolve into the glorious

Harappan Civilization. The decline set in by 2000 BC and the succeeding Late Harappan culture in all probability represents the culture of the RV.

Lokmanya Tilak's Arctic Home theory was not acceptable to many when he propunded it in the early twentieth century but it is now being revived by Russian historians. We are told that Tilak is the most quoted scholar by Russions who are inclinded to accept his theory (Sahni 2003), obiviously because of the ascription of the Russian homeland to the Aryans.

Where exactly was this homeland situated in Russia? Tilak had vaguely suggested that it could be the Mount Meru which according to the Puranic tradition was the homeland of the Aryans (Tilak 1925). The Meru has been described as the 'Mountain of Gold'. and can therefore be identifed with the present Altai Dagh which is situated at the tri-junction of Siberia-Kazakastan-Mongolia and its very name means 'mountain of gold'. What is more, the region is known for its wild horses and above all, it also has prolonged days and nights (Bongard Levin 1980 : 24) This therefore could have been the original homesland of the Aryans.

The foregoing analysis of the recent archaelogical evidence makes it amply clear that it supports to some extent Lokamanya Tilak's Arctic Home theory according to which the Aryan homeland was located in the Polar region which is characterised by long days and nights. This reigon may have been the foothills of the Altai Dagh which 'being the mountain of gold' can be identified with Mount Meru of the Puranic tradition and is even alluded to in the Rv. *(Hiraṇya-garbha-*

sūtra X, 1, 4).

1. Kalpana Sahni in her article in the *Times of India* dated 22 Feb. 2003 states that Tilak's Arctic Home theory is etiher "plagiarised or adopted" from Warren's work. This is highly objectionable because Tilak has referred to Warren's work'. *"The Paradise found"* on p.6 of his *The Arctic Home in the Vedas'.*

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The Orion and The Arctic Home in the Vedas

Mangala Mirasdar

The two questions, viz. the question of the antiquity of Vedas and the question of the original residence of the Aryans are interconnected. The great patriot Lokamanya Bal Gangadhar Tilak with a profound scholarly wisdom has discussed these two problems in his Orion and the Arctic Home in the Vedas respectively.

The scholars have used various methods to solve these problems. No literature before Vedas is available so that scholars have to draw their assumptions fully depending on Vedic literature. They have used various methods to come to a conclusion. Max Müller devides the Vedic literature in to four periods viz. *Chandas, Mantra, Brāhmaṇa* and *Sūtra.* He assigns two hundred years for each period for its progress and arrives the period of the composition of Vedic hymns at about 1200 B.C. It is argued by scholars that the period of two hundred years for the development of each division is too short. Dr. Haug and Prof. Wilson had given five hundred years for the progress of each division. But these suppositions can not decide the exact period of Vedas.

Lokamanya Bal Gangadhar Tilak, the profound scholar had shown through his research that the astronomical statements found in the Vedic literature

supply us with reliable data for correctly deciding the ages of different periods of Vedic literature. The astronomical statements unmistakably pointed out that the Vernal equinox *Vasanta Sampāta* was in the constellation of *Mṛga* or 'Orion' (at about 4500 B.C.) during the period of Vedic hymns and it had receded in the constellation of Kṛttikās in the day of Brāhmaṇas.

The ancient *ṛṣis* used to prepare their calendar mainly for the sacrfificial purposes. The *Taittirīya Saṅhitā* and the Brāhmaṇa texts declare that the *Phālguni* full-Moon was one the new years night. If the Sun be at the winter solstice on the *Phālguna* full moon day, the Moon to be full must be diametrically opposite to the Sun and also near *Phālguni* , *Uttarā Phālguni* will thus be at the summer solstice and the vernal equinox will coinside with *Mṛgaśiras,* (orion.). With solstice in *Māgha,* the equinox will be in *Kṛttikās* while when *Uttarāyaṇa* begins in *Pauṣa* the equinox will be in *Aśvini.* The *Aśvini-Pauṣa; Kṛittikā-Māgha; Mṛgaśiras-Phālguna* are the co-relative pairs of successive year beginning.

A comparatively steady status of the constellations give the conclusion that the *Kṛittikā* have not yet changed their place since the time of Brāhmaṇa texts, which ultimately proves the antiquity of Vedas.

This theory was strengthened by the hypothesis by Jacobi of Bonn, who had independently arrived at the same conclusion. S. B. Dixit had shown a passage in *'Śatapatha Brāhmaṇa'* which states that the *Kṛttikās* never swerved in those days since this

vernal equinox.

These important conclusions were neglected on the basis of the arguments that the Brāhmaṇa texts in which these astronomical suggestions are referred, give different meanings and so one cannot rely on these texts.

But, I think, this type of vague arguments are not fit to refute the assumptions, which are drawn on the profound basis of the astronomical and arithmetical calculations.

Lokamanya Tilak refers to an article in BRAS (Bombay Royal Asiatic Society) by V. B. Ketkar, which says that a mathematically worked out statement in *Tattirīya Brāhmaṇa'* mentions the planet Jupitor - *Guru* was first discovered when confronting or nearly occulting the star *Tiṣya* and it shown that the observation was possible only at about 4650 B.C. This date stands nearer to the date proved by Tilak in Orion.

The second question about the original residence of Aryans is discussed by Tilak in the Arctic Home in the Vedas. Lokamanya Tilak has taken tremendous efforts to find out the reference in the Vedas and has given many corroborative evidences from the various branches of knowledge to prove that the original residence of the Vedic Aryans was Arctic Polar region. It is not possible here to put forward the long profound and many-sided research by Tilak. I have tried to show only the glimpses of his theory.

There are many passages in *Ṛgveda* which disclose Polar attributes of Vedic deities on the traces of an ancient arctic calendar. From these deities,

Uṣas, the goddess of Dawn is an important and favourite Vedic deity and is described in about twenty hymns in *Ṛgveda Uṣas* is frequently attributed as *Śsvattamā* (I.118.2) or *Śsvat* (I 113.13). There is a reference of thirty dawns or thirty parts of one dawn revolving round and round like a wheel. (I 123.8; III. 61.3)

When a long contiunous dawn of thirty days is referred in Vedic literature, the long night preceding such a dawn follows as a matter of course and where a long night prevails, it must have a long day to match it during the year. *Taittirīya Saṁhitā* referes seven oblations given to Uṣas and the rising steps of Uṣas are described as *Vyuṣṭi, Udeṣyat, Udayat, Udita* etc. These divisions are possible in the case of only long dawn. The verse *Tānidahāni bahulānyāsan yā prācīnamuditā Sūryasya* (VII. 76.3) says that many days passed between the appearance of the first morning beams and Sunrise.

The passage describing the *gavāmayana* rite in *Aitareya Brāhmaṇa* (IV-7) suggests the long duration of Vedic dawn. Before the Commencement of *gavāmayana* sacrifice there is a long recitation of thousand verses i.e. *Aśvinaśastra* addressed to Agni, Uṣas, and Aśvins. This śastra is to be recited when the darkness of the night is about to be relieved by the light of the dawn (RV VI. 5.8). Āpastamba adds that (S.S.XIV. 19/2) all the ten *maṇḍalas* of *Ṛgveda* may be recited if necessary, upto the Sunrise. It is evident from this, that the actual rising of the sun above the horison was a phenomena often delayed beyond expectation in those days. In the *Taittirīya*

Brāhmaṇa (2.1., 2.4) it is told that the gods had to perform a *Prāyaścitta,* because the Sun did not shine as expected.

All these phenomena are so connected astronomically that if one of them is established, the others follows as a matter of scientific inference.

Putting forward a series of references from the text of *Ṛgveda* and *Brāhmaṇas,* Lokamanya Tilak has given a profound theory and a direction throught which he worked on this Āryan problem.

As a thorough research scholar with a sharp intellect, he is aware of the fact about the research method which he referred in the Arctic home in the Vedas. He says, "In every department of human knowledge, old conclusions have always to be revised in the light of the new discoveries, but for that reason it would never be just to find fault with those, whose lot it was to work earlier in the same field with scanty and insufficient material" (A. H. V. p. 4/5).

Holding this thread of this thought, I would like to narrate the assumptions by the scholars who treading the path of research have put forward new theories and thoughts in this subject.

The archeological findings are adding much more information in this matter of Aryan Home. The excavations at first Harappan site, Mohenjodaro began in 1922. Through its finds it seemed to be a mature form of Harappan civilization which had all the features of an urban civilization in a fully developed form. Sir John Marshall, the then Director General of Archaeological survey writes, "One thing stands out clear is that the civilization hither to revealed at these

two places is not an incipient civilization but an age-old and stereotyped on Indian soil, with many millennia or endevour behind it." (Mohenjodaro and Indus Valley Civilization Vol. I p. 8)

A renowned anthropologist Prof. K.A.R. Kennedy of the Cornell University and Prof. G. F. Dates of Barkeley University have conclusively proved that human skeletons found at Mohenjodaro came from different mud-layers which got repeatedly deposited due to the repeated floods in the river Indus.

Yajñaśālās have been found in Harappan site, from Baluchistan in the West up to UP in the East and Gujrat in the South. Dr. A. H. Dani, the Pakistani archaeologist says that the whole of this area must have been under the culture in which *Yajñaśālās* had place.

Vedic people used horses and horse-carried chariots as vehicles. The assumtion that the Indus Valley Civilization is older than *Ṛgveda*, was initially supported by the absence of a horse in the excavations, whereas, horse seems prominently in the Vedas; but the subsequent unearthing of the bones of the domesticated horse discards (cabalas Linn) the above assumption. In many excavated places, such as Haddapa, Ropan, Kalibanga, Lothan, Surkotda and Malvan, the bones of the horse are found.

Moreover, the study of the anatomy of a horse shows that the species of horses born in India are different from that in Iran, Middle Asia and Europe.

The Indian horses bear seventeen pairs of ribs while the North-west horses have eighteen pairs of

ribs. The horses used in Aśvamedha Sacrifice were the horses with seventeen pairs of ribs[1].

Assumptions from the discoveries in the last decade say that this Indus Culture is an improved version or a next step of Vedic culture. This Vedic culture is named as *Saraswati* Culture. In Vedic period, river *Saraswati* was an important and huge river. Though in some places in *Ṛgveda, Saraswati* is referred to as deity, but in many places the big river is referred.

सरस्वती सर्‌युः सिन्धुसर्मिभिर्महो महीरवसा यन्नुदक्षणीः

देवीरापो मातरः सूदभित्न्वो घृतवत् पदो मधुवन्तो अर्चतः (X. 64.9)

The verse ...तत् सरस्वती नदीनां शुचिर्यती गिरिभ्यः आसमुद्रात् (VII. 95.2) Clearly refers the river flowing towards ocean. The verse

अम्बितमे नदीतमे देवितमे सरस्वति ।

अप्रशस्ता इव स्मसि प्रशस्तिमम्ब नस्कृधि ॥ (II. 41.16)

refers her as the biggest of the rivers. The Vedic culture flourished on the banks of this river. The river in the flow of time disappeared. The place where she disappeared is referred to by *Brāhmaṇa* text as *Vinaśana* (षड्विंश ब्रा. 25.10.6 जै. ब्रा. 4.26)

The modern science is becoming helpful to prove the existence of *Saraswati.* The American satallite <u>*Landsat*</u> had supplied an important information of the dried bed of *Saraswati.* The scientists of physical Research Laboratory and Space Research Centre (Ahmedabad) have got the photographs by NASA. The photographs show the bed of the river from *śivalik* mountain near Simla up to *Kaccha.* The width of the bed in some places is eight kilometers. It matches with the literary evidence of Ṛgvedic hymns

which described *Saraswati as naditame.*

The Indus civilizartion was the culmination of a long process of cultural configuration that was going on through several millennia in the geographical tract between the hills of Baluchistan and the *Ghaggar* Basin. The change from early Harppan to the mature Harappan seems to have taken place in the Saraswati Basin. As J. P. Joshi in his book (A Reconsideration on the basis of distribution of maps, Indus civilization - J. P. Joshi and others.) says- "The distribution map of Harappan sites shows quite clearly the concentration of Indus sites with early Harappan material overlaid with new material in the basins of *Ghaggar* or *Saraswati* and its tributaries".

Thus the line of research with the help of Modern Science goes like this. It corroborates the great antiquity of Ṛgveda, the theory put forward by Lokamanya Tilak in the Orion. As a researcher with unbious mind he was ready to examine old conclusions in the light of new discoveries.

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Section 3

The Gītārahasya : Its Significance in the Socio-political and Philosophical context

"Gītārahasya" or "Karmayogaśāstra" Tilak's Unique Contribution to Indian Ethics

R. N. Aralikatti

वागर्थाविव संपृक्तौ वागर्थप्रतिपत्तये । जगतः पितरौ वन्दे पार्वतीपरमेश्वरौ ॥

(I) Introduction : Tilak : His Works :

Lokamanya Tilak, who was not only the most popular representative of Indian people and leading luminary of freedom struggle and "Father of Indian Unrest", who gave the nation its mantra (or motto), "Freedom is my birthright, I shall have it", which has left his inerasable stamp on political history of India but a man of various extraordinary gifts in several fields of life in which he might have earned present distinction and pre-eminent and enduring fame which he has earned in Sanskrit and Indology as an outstanding scholar by his scholarly works like The Orion or Researches into the Antiquity of Vedas, Vedāṅga-Jyotiṣa and Vedic chronology and 'Gītārahasya'. The last one is his 'magnum opus' or monumental work, the first philosophical prose writing of the front rank, in weight and importance in Marathi language, next only to Jñāneśwarī by Jñānadeo, which is in poetic from both of which can be considered as classics in Marathi literature. His scholastic works are just byproducts of his genius as politician and nationalist since they are composed mainly by way of recreation that too in jail during the

peirod of compulsory cessation from active political life. His mission in life was to educate his people for achieving freedom from foreign rule. His passion was to realise and renew the past greatness of our country by the greatness of its future by initiating *Swadeshi movement.* It was Tilak who was the first to infuse Indian politics with Indian Religious fervour and Spirituality for powerful political awakening in India not only through social and cultural activities but also through his academic work like 'Gītā-Rahasya'. To quote Babu Arbindo, "He was the very type and incarnation of Maratha character, qualities and spirit but with unified solidity in the character, the touch of genius in the qualities, the vital force in the spirit which made him "Lokamanya", true representative man of his people".

(II) Author's Motivation and Purpose of Gītārahasya :

The multifaceted personality of Tilak is reflected in his scholarly work particularly Gītā-rahasya or Karmayogaśāstra, a monumental work on Gītā. It is not mere translation or commentary on Gītā but original cristicism and presentation of ethical truths. In it, he found the basis of Indian Philosophy, Indian ethics and Indian Religion which the lord Śrīkṛṣṇa preached to Arjuna, who was in a great dilemma about the conflicting claims of duties - i.e. what is doable and what is non-doable. What prompted and agitated Tilak's mind from his very childhood was dichotomy preached to him between the world and the God by his elders and preceptors. He began to think, "Is day to day life incompatible with philosophic life of attaining the highest goal of human life i.e.

Mokṣa? Does our religion really want us to give up this world and renounce in order to attain the perfection of manhood?" He began to seek answers to these in Gītā, which is universally acknowledged classic of Hindu religion, one of the triads of Indian philosophical texts along with the Upaniṣad and the Brahmasūtras. Thus began his study of Gītā and as he approached it with open mind without any prepossessed ideas or prejudices, he found answers to his queries. He surveyed all the related literature including the great commentaries in Sanskrit of five great Ācāryas and Jñāneshwari of Jñānadev in Marathi. He found them inadequate as each one of them interpreted Gītā to suit one's own doctrinal theories, highlighting the importance of Jñāna or knowledge or Bhakti or relative importance of either or both but ignoring the importance of Karma or performance of duties. Tilak found that the context, time and circumstances and purpose for which Gītā was preached were not properly considered by all his predecessors. Gītā was taught to desponding Arjuna to unduce his to fight (i.e. action). How can one say that the import of Gītā is Jñāna alone or Bhakti alone? Of course, Gītā does contain Jñānayoga as well as Bhaktiyoga including reference to Pātañjala Yoga (in 6th ch.) as Jñāneshwara terms it as Pantharaja but they are all subservient to Karmayoga. Gītā enjoins action even after one attains Mokṣa or perfection through Jñāna or Bhakti or both. The teacher, i.e. Lord Śrīkṛṣṇa cites his own example and that of Janaka King by saying that although he has nothing to acquire in this world, he continues to act for the

welfare of the world. He further impresses on Arjuna that unity among the man, the world and the Almighty is perfectly achieved only when one continues to serve the welfare of the world (lokasaṅgraha) by serving his will through performance of one's duties by remaining in the world and not by renouncing it, by following Karmayoga.

(III) Historical (basis) Karmayoga

The Lord says that the Karmayoga, advocated in Gītā is not some new theory but an old one taught in Mahābhārata and Bhāgawata and Nārāyaṇīya text, where importance of activism or pravṛtti-mārga was duly highlighted. The Ṛṣi Nārāyaṇa has preached on energetic doctrine or dharma प्रवृत्तिलक्षणं धर्मं ऋषिर्नारायणोऽब्रवीत् (M.B. Shanti 217-2) Yoga i.e. Karmayoga is charactersied by energistic action and Jñāna by renunciation. प्रवृत्तिलक्षणो योगः ज्ञानं संन्यासलक्षणम् (Mahābhārata). The doctrine preached by Nārāyaṇa is energetic one प्रवृत्तिलक्षणश्चैव धर्मो नारायणात्मकः (Mahābhārata). The Bhāgawata teaches desireless action, भागवतं निष्कामप्रवृत्तिपरम्. It was taught by Lord Kṛṣṇa to विवस्वान् to विवस्वान् to मनु to मनु to इक्ष्वाकु (Bh-1-38). Gītā enjoins on all classes of people to take part in all worldly activities till death with desireless frame of mind, while at the same time possessing peace of mind as advocated by path renunciation. One must remember that Gītā was preached by one all powerful and highly revered kṣatriya to another powerful arch-warrior to induce the latter to perform his duties according to the law of warriors. If Gītā's purport was to highlight abandonment of worldly life or renunciation or to take

to mere devotion to the Lord, there was no necessity to give this advice to Arjuna as he was ready to give up terrible warfare of his own accord.

(IV) Great Ācāryas & Jñāneśwara on Gītā :

In his brilliant and illuminating introductory chapter of Gītārahasya, Lokamanya Tilak presents a panoramic picture of commentaries and tīkās on Gītā particularly of five great Ācāryas whose commentaries in Sanskrit, are quite well known and also of Jñāneśwara whose Jñāneshwari is widely acclaimed classic in Marathi. Every Ācārya interprets Gītā to suit his own doctrine viz. Advaita by Śaṅkarācārya, Viśiṣṭādvaita by Rāmānujācārya, Dvaita by Mādhavācārya, Śuddhādvaita by Vallabhācārya, Davita-dvaita by Nimbāraka and Bhakti-cum-yoga oriented Advaita of Jñāneśwara. Every school prescribes duties from the point of view of release only as per their philosophy. Śaṅkarācārya preaches non-dualism based on the theory of Māyā coupled with renunciation of action. Rāmānujācārya advocates qualified monism based on the reality of illusion, coupled with devotion to Vasudeo. Mādhavācārya preaches dual-nondual coupled with devotion. Jñāneśwara bases his doctrine of Advaita coupled with devotion and yoga of Patañjali as the excellent path (pantharaja) for achievement of highest goal i.e. mokṣa. None of them looks upon Karmayoga as advocated in Gītā from the beginning to the end as the main import of Gītā as demanded by the context and circumstances in which Gītā was preached to Arjuna. Arjuna was on the horns of a dilemma of conflicting principles of morality and was

confused about his proper duties is evident from his own statement in the first chapter viz. "Shall I do this or Shall I do that? His continuous thinking paralysed his action. He wanted to find a sinless path of duty and perform them as enjoined on his status as a warrior. Thus it is clear that proper preaching under the circumstances would be to induce him to action and inspire him to perform his duties. That was what was axactly preached to him. He acknowledges the same at the end by saying that my doubts have been removed and I shall follow your words and fight. With a view to convince him as to how he should perform his duties after knowing the whole philosophy of Karmayoga which is based on metaphysics or Brahmavidyā and supported by devotion. Thus knowledge and devotion are just supplementary to the main purport of Karmayoga. The author of Gītā - rahasya supports his thesis by quoting modern Indian and foreign scholars like S. Radhakrishnan and Prof. Paul Deussesn and others. He quotes Krishnanandaswami of Varanasi from his Gītārthaparamasāra. "गीता नाम ब्रह्मविद्यामूलं नीतिशास्त्रम्।"

(V) Criteria of interpretation advocated by Mīmāṁsā :

The uniqueness of the author of Gītārahasya, as stated earlier, consists in its application of criteria of Mīmāṁsā for determining the correct interpretation of any text which is generally accepted for interpretation of any sentence, chapter or book. It is followed by Indian authors and foreign scholars. The works Mitākṣarā and Dayābhāga which deal with Hindu Law

attempt to harmonize the Smṛti texts on this principle. Even in English courts of justice, as in Indian courts, even today, these very rules of determining the import of a any text or sentence are observed. These rules are as follows :

उपक्रमोपसंहारावभ्यासोऽपूर्वताफलम् ।
अर्थवादोपपत्ती च लिङ्गं तात्पर्यनिर्णये ॥

There are seven criteria for determining the purport - viz. The beginning and the end (or conclusion), repetition, newness or uniqueness, the effect or end result glorification and arguments. There should be consistency among all these. It is like a straight line as defined by Geometry goes straight from the point of commencement to the last point without going astray, above or below, right or left. The writer starts his book, with specific objective which he states in the beginning (उपक्रम) and when it is achieved, he concludes the book i.e. (उपसंहार) by stating that his purpose is achieved. In course of the book, the writer emphasizes repeatedly the main purport. It is called Abhyāsa. Then he lays stress on the uniqueness or newness (apūrvatā) and the effect or end-result (i.e. phalam) Again in between he deals with many other things by way of glorification or illustration or comparison which are supplemental, indirectly aiming at fixing the main purport. Further he presents arguments for refuting contrary doctrines and thus proving his own point. These are called arthavāda and upapatti. Although these are traditional Śāstric rules, the Ācāryas and other did not follow strictly these rules or twisted them to suit their own doctrine.

(VI) Application of Mīmāṁsā criteria to Gītārahasya :

The author of Gītārahasya, examines Gītā both following traditional approach and also externally following Westerner's approach. He cites similar examples from Western or English literature here such dilemma of doable or non doable action is presented. The case of Shakespear's Hamlet is similar where Hamlet is equally paralysed by inaction by too much thinking resulting in confusion of "to be or not to be", (to kill or not to kill) in respect of killing his own uncle and crowned king who had married his own mother. The problem of Hamlet resulted in his tragedy because there was none to guide him unlike Arjuna, who had the benefit of guidance of his friend, guide and philosopher, Lord Śrīkṛṣṇa. Applying the criteria of Mīmāṁsā to Gītā, the beginning of Gītā starts with the problem of Arjuna, when he sees in the battlefield his own Kinsmen, preceptors, uncles, brothers, sons and grandsons and he is filled with pity and despair. His limbs droop down, his body shivers, his intellect is confused and his mind is greatly agitated. He begins to think, "why should I kill my on Kinsmen? For the sake of obtaining Kingdom? What is the pleasure I get by killing these falcons who have come to kill us? We will be committing heinous sin, since the whole clan will be destroyed, thereby resulting in caste confusion which leads to a chain of catastrophe. Thus agitated he threw away bow and arrows and sat down fully dejected saying 'I won't fight; (न योत्स्ये'). Then on seeing Arjuna' s despondency, confusion and total inaction, Śrīkṛṣṇa preaches Gītā to induce total inaction, Śrīkṛṣṇa

preaches Gītā to induce him to right course of action by answering all his querries one by one by advocating the science of Karmayoga basing it on the philosophy of absolute self (Brahmavidyā), the path of knowledge coupled with path of devotion and dedication the Lord. As a warrior, he tells him, it is your duty to fight against all those, who stand before you, be them preceptors or any Kinsmen, since you are fighting not with any selfish motive but for the sake of your legitimate rights to rule the kingdom and for maintenance of social order or dharma. Since it is a dharma yuddha, no sin will accrue to you by fighting or killing. On the contrary, if you runaway from the battlefield, you will be committing a sin, apart from tarnishing your reputation as a coward. Coming to the philosophical aspect of killing, killed and killer, what is it that you are going to kill? Body? It is, of course, perishable afterall whether you kill it or not. You are only a tool for name's sake. Are you going to kill soul? No because it is imperishable. Thus you are neither killer nor killed. You should not entertain false 'ego' thinking that without you, nothing in the world moves. Thus Śrīkṛṣṇa advocated the philosophy of Sāṅkhya or Jñānayoga, impressing upon him, steadying his mind by being a sthitaprajña whose characteristics are narrated in great detail in II chapter and continuing the same topic of Karmayoga in III, IV and even in V chapters. It is not the action but the right frame of mind or pure reason that is important. It is your duty to perform action, without desiring its fruit. One must not act with any motive (fruit) nor one should be inclined to inaction.

कर्मण्येवाधिकारस्तें मा फलेषु कदाचन ॥
मा कर्मफलहेतुर्भूः, मा ते सङ्गोस्त्वकर्मणि ॥ (I गी. II 47)

Desireless action with pure mind and with devotion and dedication to the Lord is the message of the Lord, that is given by Śrīkṛṣṇa. At the end Arjuna says that his doubts have been removed and he would fight following his words. Thus what is stated in the beginning is rightly concluded at the end. So there is consistency in the commencement of the topic and its conclusion. In course of intervening chapters there is repetition (Abhyāsa) to fix the main import. For example, the following statements, scattered throughout the text. amply illustrate repetition. Therefore, O Arjuna fight तस्मात् युध्यस्व भारत (G2-37). Therefore rise up with a determination to fight तस्मादुत्तिष्ठ कौन्तेय युद्धाय कृतनिश्चयः । (G2-37). Therefore give up attachent and do your duty. तस्मादसक्तः सततं कार्यं कर्म समाचर । (G 3-19) कुरु कर्मैव तस्मात्त्वं (G 4-15). Therefore perform action मामनुस्मर युद्धय च (G 8-7). Therefore think of me and fight युध्यस्व जेतासि रणे सपत्नान् । Fight and you will conquer your enemies ज्ञात्वा शास्त्रविधानोक्तं कर्म कर्तुमिहार्हसि । (G 16-24) एतान्यपि तु कर्माणि, सङ्गं त्यक्त्वा फलानि च कर्तव्यानीति (G 18-6) You must do all these duties without any attachment and without any desire for fruit. Similarly the uniqueness or अपूर्वत्व of Gītā consists in that in no other work in Sanskrit literature, this science of Karmayoga is advocated in such details. the next criteria is arthavāda which is evident in many other auxiliary things, like history of Karmayoga, necessity of devotion, etc which are dealt with. Similarly the statements refuting pure renunciation or mere knowledge or mere devotion which are contrary to the

principal import of Karmayoga and arguments for the proof of Karmayoga are nothing but उपपत्ति. Thus it is clear that all the seven criteria determine Karmayoga as the main purport of Gītā, which is based on Brahmavidyā or Jñānayoga with devotion and dedication to the Lord as its means.

(VII) Continuity of all chapters in consistency with Karmayoga :

As already stated earlier, the central theme of Karmayoga is discussed in all chapters from 1st to the 18th chapter, although there is discussion on both Jñānayoga and Bhaktiyoga as supplementary to the main purport of Karmayoga. Some scholars divide Gītā into three parts, 1 to 6 as Karmayoga, 7th to 12th as Bhaktiyoga and 13th to 18th Jñānayoga. Even Jñāneshwara is of the opinion that 1st four chapters of Gītā, advocate Karmayoga, then next seven Bhaktiyoga and the last seven Jñānayoga. But the author of Gītārahasya disagrees with both these viewpoints. He says that there is no watertight compartment to make such separate divisions since the various statements supporting three yoga are scattered through out the eighteen chapters of the text, and as such there is continuity of the topic of Karmayoga only, with which the text begins and all subsequent chapters discuss various aspects of Jñānayoga and Bhaktiyoga, as interlinked with Karmayoga. First chapter starts with despondancy of Arjuna, resulting in his refuse to fight. The second chapter discusses as to how his thinking and feeling are irrelevant from the Sāṅkhya theory or

metaphysical point of view. He defines yoga as equality or equal frame of mind (samatva) and skill in performing one's duty. समत्वं योग उच्यते योगःकर्मसु कौशलम्. For attaining such a frame of mind, the true knowledge of absolute self and control of one's own mental tendencies are necessary. Hence the first five or six chapters, directly advocate Karmayoga Then from seventh to twelfth, there is exposition of "Jñāna and Vijñāna" or Adhyātma in which knowledge and devotion which are required for desireless action and equal frame of mind that is the basis of Karmayoga. are discussed. The twelfth chapter which is Bhaktiyoga, needs special mention here. The realisation of the absolute self and knowledge of identity of Ātman with all the created beings as pathway to imperceptible God from part of Jñānayoga which is accessible more to the most intelligent ones. But the common man wants perceptible for of God which he can worship and attain the highest goal. Thus there is need for Bhakti or love or faith to purity the knowledge acquired by pure reason. Just as the bullet in a gun cannot the fired without the help of gunpowder, so also knowledge acuqired by mere intelligence, will not redeem anyone without such love and faith. This is also explained in Chhāndogya Upaniṣad through Āruṇi-Śvetaketu dialogue in which the former tells the latter as to how a big baniyan tree has sprung from the tiniest of its seeds and asks Śvetaketu to 'put faith' or Śraddhasva'. This path of love towards God is termed as Royal path (Rajamārga) as it is easiest and open to all irrespective of caste, creed in contrast to the path of

knowledge. However one may note that the most of the characteristics of Sthitaprajña, mentioned in Bhaktiyoga are more or less the same Bhāgavata also refers to the same trait of devotee (or Bhagavata) सर्वभूतेषु यः पश्येत् भगवद्भावमात्मनः । भूतानि भगवन्त्यात्मन्येष भागवतोत्तमः (Bh. 11-2-45/3-24-46). Thus the real significance of worship in the context of Karmayoga, consists in the performance of one's own duty, thereby attaining the highest goal.

स्वकर्मणा तमभ्यर्च्य सिद्धिं विन्दति मानवः । (Gītā 18-46)

स्वे स्वे कर्मण्यभिरतः संसिद्धिं लभते नरः । (Gītā 18-45)

Thus the topic of desireless action involves both Sāṅkhya doctrine or Jñānayoga and doctrine of devotion. Metaphysics is the foundation for ethics generally in all philosophies. One's code of conduct and performance of ones duties i.e. कर्मयोगशास्त्र has an intimate connection with one's own views on the interrelation of man, the world and the God i.e. Brahmavidyā. The author of Gītārahasya advocates performance of action in this word even after the man has achieved highest union with Supreme deity by knowledge or bhakti (devotion) to keep the world going by right path for the welfare of all. Further from 13th to 18th various aspects of spirituality viz. faith austerity, steadfastness, charity and classification of qualities such as satva, rajas, tamas etc. which mark spiritual life are discussed, along with nature of all pervading. Almighty in the Universe, individual Jīvā and its identity with the universal self. Thus at the end (last chapter) the Lord obtains an acknowledement from Arjuna that he is ready to fight now since all his doubts are removed. Thus the main thread of

Karmayoga runs through all the chapters and continuity and consistency with Karmayoga are maintained throughout.

(VIII) Comparison with Western Moralists :

The second unique feature of Gītārahasya is that its author considers the exposition of the doctrine of Gītā incomplete, unless one compares the ethical principles, propounded by Western philosophers and Moralists with the fundamental spiritual principles of the doable and the non-doable actions as enunciated in the Gītā. He has therefore not only compared but critically reviewed their opinions on the science of ethics pertaining to the most salient and important points. For example, on the question of ethics and freedom of will, the author quotes Dr S. Radhakrishn's article on Gītā and Kant published in 1911 in International Journal, wherein similarity between the ethics of Gītā and Kant and Green have been pointed out. Similarly the the author of Gītā-rahasya quotes prominent writers of ethics at many places from their well known works. He often cites Kant from his "Critique of pure reason and Critique of practical reason", Green from his classic work, "Prologomena to ethics", Mill from his "Utilitarianism", Dr. Carus from his "Ethical Problem", Paulsen's "System of ethics", along with Spencer, Comte and others. They belong to materialistic school. i.e. (ādhibhautika), or Intuitionist school (ādhidaivika) or Metaphysical school i.e. ādhyatmika. These schools slightly differ, depending on their construction of interrelation among the trinity i.e. individual self (Jīva) cosmos

(Jagat) and God (highest/absolute self.) But all of them accept the common criteria of 'motive' or 'reason' behind any action and not action itself in determining any action as right or wrong, good or bad. It is purity of reason or will or desire that matters most. The morality of action like speaking truth or observance of non-violence although they are universal are not without expectations as Mahābhārata says.

सत्यस्य वचनं श्रेयः सत्यादपि हितं वदेत्। युद्भूतहितमत्यन्तमेतत् सत्यं मतं मम।
M.B. San 329.13/287.19) (Speaking truth is good but speaking that which leads to welfare of all is better (prefered). That is real truth which leads to the welfare of all.)

न नर्मयुक्तं वचनं हिनस्ति, न स्त्रीषु राजन्, न विवाहकाले।
प्राणात्यये सर्वधनापहारे पञ्चानृतान्याहुरपातकानि ॥ (MBA 82-16). On the five following occasions speaking lie does not incur any sin viz. when one is speaking in jest or with women or in course of negotiating a marriage or when one life is in danger or when one's all property is being robbed.

Similarly Sidwick, Mill, Kant and Green are quoted as instance in point. Sidwick decides what is doable and not doable by the rule of *"greatest happiness of greatest number."* He says, we need not tell the truth to, children, madmen, invalids, the enemies and robbers. Mill also supports him. Lestie Stephen says, "It seems to me that known consequences of an action, must always be relevant to its morality. If I were absolutely certain that a lie would do good, it makes me think it duty to lie. Green considers such action from metaphysical point of

view and says, "A true moral philosophy does not recognize any value in conformity to the universal truth (such as Satya or Ahiṁsā) simply as such, but only in that which is in conformity of one's readiness to sacrifice every lower inclination in the desire to do the right for the sake of doing it". Moralists like Bain, Whetwell also support this view. The author of Gītā-rahasya cites number of parallel examples from Mahābhārata which tally with the views expressed by Western scholars and even Christian religion. The well known story of Yudhiṣṭhira and his sacrifice, where he spent liberally in donating his wealth to all the deserving and needy. But mangoos judging the ethical value of the King as of lower rank in comparison to that of a poor Brāhmin, who sacrificed the entire food, meant for his family to poor Brāhmin, who was hungry. Even Kant also expresses the same opinion when he says that the value of sacrifice amidst adverse circumstances is rated higher although the motive in both the cases is pure. The criteria of, "Greatest good of greatest number, or "enlighted self interest" etc. as advocated by Western moralist tally with some of the views of Mahābhārata, but views of Westerner's morality lack the metaphysical concept of treating all beings as oneself which is chief characteristic of Indian ethics which is based on Indian metaphysics. The doctrine of Vedānta philosophy pertaining to identity of Brahman and Ātman, freedom of will, causality are more advanced and definite doctrines than those of Kant and Green. Of course Paul Deussen, states in his book on "Elements of Metaphysics that all principles

of ethics can be substantiated on the basis of metaphysical position. Similarly the docrine of Gītā i.e. Karmayoga is based on metaphysical foundation. That is why it is stated in the colophone of each chapter that Gītā is yoga i.e. Karmayoga (ethics) which is included in Brahmavidyā (i.e. metaphysics). The Similarities between Western moralists and ethics of Gītā can be summed up as follows :

1) Desiring reason (Vāsanātmikā buddhi) of the doer is of higher importance than his external actions.

2) When pure reason i.e. (Vyavasāyātmika buddhi) has become self engrossed (ātmaniṣṭha) and free from doubt and equable, the practical reason (ācāradharma) of itself becomes pure and holy.

3) The behaviour of Sthitaprajña like stoics, in western morality whose reason has become equable and steady, become authoritative and standard for ordinary men as they arise out of self identifying (ātmaupamya) reason.

4) By identifying the individual self or body with cosmos, it attains pure and all comprehensive form and self identifying vision towards all created thinks. This is the Yogaśāstra based on Brahmavidyā of Gītā like critique of pure reason as the basis for critique of practical reason of Kant.

(IX) Conclusion (Upasaṁhāra)

The author concludes that the secret (rahasya) of Gītā lies in harmonizing the Karmayoga with both Jñānayoga and Bhaktiyoga. It is a spiritual knowledge, devotion and action all combined in one. It does not make distinction between caste, creed or countries. It is a religion which shows forbearance

towards other religions. It is the sweetest and immortal fruit of the tree of Vedic religion. It is nectar like milk, milked from the cows of Upaniṣads, where Arjuna is a representative of any human being and as such it is addressed to us all. It proclaims in loud voice. *'Perform lifelong your several worldly duties,* according to your respective positions desirelessly, with self identifying vision for the universal good (लोकसंग्रह). Consider this as real worship of the Lord. Therein lies your happiness in this world and in the next. One's own life should be turned into sacrifice (yajña) whose main purpose is the welfare of one and all (lokasaṅgraha)"

(X) Prayer :

Like Jñāneśwara, whose pasāyadāna which is a wellknown world prayer, Lokamanya concludes his Gītārahasya with these sparkling words. "There should come to birth again in this country such noble and pure men as well worship the Parameśwara according to this euqable and brilliant religion of Gītā which harmonizes, "Devotion, spiritual knowledge and Energism". Can there be any better message than this from a nationalist genuis who inspired the nation by his socio-political and cultural activities as a real Karmayogi? Thus the Karmayogaśāstra as the true purport of the Gītā is Lokamanya Tilak's unique contribution to Indian studies in general and Indian ethics Gītārahasya in particular.

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Tilak's Theory of Karmayoga : A Fresh Appraisal

Krishna S. Arjunwadkar

नमस्तस्मै भगवते तिलकायामितौजसे । येनायं राष्ट्रपुरुषः प्रबोधं पुनरापितः ॥

The Tradition of commentators of the BG

The Bhagavad-gītā (BG) has been a source of inspiration and veneration for large sections of Indian society presumably since the early centuries of the Christian Era and, consequently, attracting scholars of repute through centuries to interpret it the way they understood it. This in its turn increased the popularity of this text so as to inspire newer generation of scholars making fresh attempts of interpretation. The oldest available, but not necessarily the first, commentary on BG is that of Śaṅkarācārya who has referred to earlier commentators and criticised their views at several places in a general way and on particular issues. Among the Vedantic schools, the BG is accorded a place of honour as a basic text, with two more, the Upaniṣads and the Brahmasūtras, together called the Prasthāna-trayī. Five centuries later, Jñānadeva wrote an exhaustive Marathi commentary on BG, popularly known as Jñāneśvarī, which is held in high esteem by Marathi-speakers and has been moulding the Marathi mind for successive centuries. Jñānadeva's mention therein of the *Bhāṣyakāra* as a guide is taken by many to imply a covert reference to Śaṅkarācārya, despite the view being disputed by some modern scholars who would

rather like to relate Jñānadeva to a Kashmirian school.

This tradition continued until, in recent times the voluminous work of the late Bal Gangadhar Tilak, called the Gītā-rahasya (GR) (1915) or Karmayoga-śāstra, with its scholarly exposition of the philosophy, religion and ethics of the BG vis-a-vis the Western outlook on these subjects, persuaded the contemporary generation, fed on and influenced by English education as envisaged by Macaulay, to look at its heritage seriously and realize its worth in the context of world thought. The success of GR in laying a philosophical foundation for the activist forces of his times fighting for the cause of independence is immeasurable and will ever remain an object of admiration and veneration for generations to come. What adds to the greatness of this work is the fact that it is the product of Tilak's imprisonment for six long years away from his homeland-thanks to the vindictive attitude of the Britishers which gave Tilak a chance to devote his scholorly talents to a worthy cause, undisturbed by political occupation. The only precedent I know of in the Sanskrit traditions is more than a thousand years' old, viz., that of Jayantabhaṭṭa (7th c. A.D.), the author of Nyāyamañjarī, an encyclopaedic work on Indian logic which, on the authority of its author, was the result of his long imprisonment by a Kashmir king of his time. We should indeed thank the Kashmir king and the Britishers for putting the two scholars into jail! Tilak's work influenced several contemporary and subsequent authors who wrote on BG from a social outlook.

Tilak's Presumptions and Conclusions

The most common feature of all writers of this class is to take personalities associated with the BG as real, historical and regard the events involving them as evidence in deciding its teaching. GR represents this outlook. Thus Arjuna's reluctance before, and readiness after, the dialogue that is BG, is taken as a proof of the intention of the work to induce activisim. Since, between the two points, all Upaniṣadic philosophy is presumed or stated succinctly, it is assumed that Arjuna had in the meantime become a *jñānin*- a man of realization and hence qualified for liberation as conceived by the Upaniṣads. The description of how Arjuna had the privilege of the exclusive vision of the allpervading manifestation of Kṛṣṇa-identified as God Almighty-during the former's dialogue with the latter is considered to strengthen his claim to qualifications for liberation. The readiness of such a person to fight reveals that, in the view of BG, performance of social duties-varṇāśrama-dharma, to use a time-honoured term standing for the prototype of such duties--which is emphasized repeatedly and more than anything else in the course of the exposition in BG, is a must even for a man of realization, for the good and guidance of the society, i.e., for *loka-saṃgraha,* if not for personal gain, as is the case with the ordinary people. Arjuna thus followed the same path as was trodden by Kṛṣṇa the God and Janaka the renowned philosopher-king of ancient times. The name given by BG to such disinterested activism is Karmayoga (KY)-a term occuring prominently in BG for the First time in

the history of Indian philosophy and popularized by GR-which is GR's main thesis. The BG as viewed by GR is thus opposed to renunciation which has been the key-note of Vedāntic tradition for centuries.

Ancient Support for a Contemporary Cause

There can be no objection to an attempt to reinterpret old texts to meet contemporary needs of a society; and it must be admitted that GR has succeeded in carrying masses with it to a preconceived goal. Tilak was a great fighter and organizer who pitted Indian masses against the Britishers in a degree no one before him could. All organizations need myths (or, alternatively, common interests) to build on; and support for a cause from an ancient source goes a long way in convincing a tradition-bound society of the necessity of coming together under a single banner. 'I am not stating anything new; I am only reiterating what our past masters have revealed.' This is an attitude assumed by Indian thinkers through centuries and liked by their society in general, despite the fact that new elements did find their way to the old framework but in the guise of an extension of the old ones, although India has also produced great men who took a positively opposite attitude of replacing old values with new ones. Tilak shrewdly recognized this fact and presented his outlook as coming from an old revered work.

The Basics and the Superstructure

This is the credit and rationale of Tilak's work. From a strictly philosophical point of view, however, Tilak's theory does not satisfy the logical demands a theory has to meet in order to be accepted as viable.

A theory has its basics on which it builds the superstructure; and it is naturally to be expected that the latter should be harmonious with the former. What is wanting in Tilak's theory is the harmony between its basics and superstructure. To understand this, it is necessary to state briefly the contents of these aspects of his theory of KY.

The Basics

The basics of Tilak' s theory have to be founding the philosophical heritage of BG. BG is admittedly the successor of the Upaniṣads to such an extent that a number of verses from the latter are bodily borrowed by the former. It borrows the Advaitic concepts of the ultimate unity of the individual and the universal principles, and the concept of liberation-*mokṣa*, the highest *puruṣārtha* or goal of human life, in all its distinctive features which can be achieved only through *jñāna* or self-realization. Purification of mind is a precondition for the rise of this *jñāna*; and the *yogas* of *karman*, *bhakti* and *dhyāna* are means towards this end. The Self, though seated in the perishable body, is eternal, unconcerned with actions which in fact belong to the *prakṛti* with which the Self identifies itself through ignorance and, according the authoriship self of these actions to him plunges into *saṁsāra*. The Self is distinct from the body and the various identities associated with the body are superimposed on it through ignorance. The concept of liberation presumes that of bondage which is the result of past actions accumulated though a chain of lives and deaths. The path of self-realization passes through a detached attitude towards worldly

pleasures resulting in renunciation of action identified as the root of bondage. Heaven is conceived to be varying with the size and quality of merit one accumulates, i.e., heaven is discriminative, and lasts only until the balance of merit is exremains Liberation, on the other hand, is conceived to be permanent and allows no element of discrimination. Unlike in examinations and jails there are no classes or grades (A, B, C...) in liberation. If there be any, it will cease to be what it is conceived to be. It allows no ethical code for *jñānin* who can continue to live even after liberation; for liberation has nothing to do with death. This theory has its own logic and has been developed to the finest details through centuries by authors of outstanding scholarship. 'Ethical code for a liberated soul is a contradiction in terms. Self-realization is trans-ethical as is categorically stated by the Upaniṣads.

Tilak's Superstructure and the Issues It Raises

When we check details of Tilak's concept of KY vis-a-vis these basics, we realize that, by accepting some and rejecting or modifying other elements of the Vedāntic theory briefly stated above, he has landed himself in problems for which he has no solutions. The most conspicuous of his departures from the basics is that KY does not end, but starts, with the acquisition of *jñāna*, and is an option for renunciation. To a question why he should practise KY once he has achieved its goal, *jñāna*, Tilak's reply is 'for *loka-saṃgraha*', in cosnideration of the proper conduct of the society; for, as BG says, the common man follows the great. This stand leads to several questions :

(i) If KY is compulsory for a liberated man, is he really liberated?

(ii) Is it logical to expect a liberated man to practise KY in consideration of the social conduct which, for him, is saṃsara, a net fabricated by ignorance?

(iii) Is it logical to allow KY which is essentially ethics to override *jñāna* which is trans-ethical?

(iv) Is Tilak's theory supported by evidence acceptable in scientific dialogue?

(v) Does Tilak's understanding of jñāna tally with that in Vedantic tradition?

Mokṣa vs Ethics

The concept of *mokṣa* in Vedānta which means a total dissolution of identity has no parallel in social thought which is nothing if not characterized by identities. The social thinker thinks of a man as distinct from other animals as also from men of different identities involving race, nation, province, caste, colour, language, relations and so on. The Self as defined by Vedānta is pure consciousness free from all these and similar distinctions. The very concept of social duty, the protection and continuation of which is Tilak's major concern, is based on such distinctions. How is it relevant to state where all such distinctions are denied? By its very nature, ethics is based on an awareness of, and for a sound conduct of, the society. In other words, it belongs to the relational world. How can it go hand in hand with *mokṣa* which is the cessation of all relations? for a pious man, there is a lot of difference between the water of the holy Gaṅgā and the tap

water. For a scientist, water H_2O whether from the Gaṅgā or a tap. Scientific reality is indifferent to sentimental considerations; for the former is based on objective evidence, and the latter, on willed cognition.

The World of 'Willed Cognition'

What is 'willed cognition'? Established epistemology recognizes two categories of cognition : True or valid, and false or invalid. The cognition of a rope as a rope is true; that as snake is false. These categories are so familier that they hardly need an explanation. Although sufficient for explaining empirical experience, these categories cannot explain a vast area of our life called *culture*. Culture covers everything from plays to politics, language to literatures, religions to social institutions, love songs to national anthems, stickers to national flags, trade unions to nations,- in fact, all that man has created on the basis of his will as against the physical world which exists irrespective of man's will. In drama, we identify the actor with Hamlet on the strength of our will and enjoy it. The criterion for the willed nature of this experience is our awareness of the separate identities of the actor and Hamlet. In the example discussed above, the holiness of the Gaṅgā water is a matter of will handed down by tradition and subsequently transformed into a faith we know that language constists of words which are but sequences of sounds linked to certain meanings by convention which is ultimately the will of the speaker. On the poetic level, we call a man a lion for his courage, knowing full well that the two are in fact different. We

do lots of such identifications for aesthetic or similar purposes. When we are not aware of this difference, false cognition results, as, for example, when we cognize a rope as a snake. All values, social institutions, systems, conventions and the like are phenomena involving willed cognition. Traditional analysis of human experience which does not recognize willed cognition cannot be regarded as complete or final.

The Scientific and Mythical Contents of the Vedānta

While classing ethics as the domain of willed cognition, I am aware that Vedāntic works are full of mythical contents based on will. From various accounts of the creation of the world to a large number of meditational ways and devices, Vedānta texts abound in mythical contents. This necessitates an attempt to sift scientific content of Vedānta from the mythical one. Identity of the individual soul with the universal principle based on a scientific analysis of our states of consciousness-waking, dream and deep sleep- is the main thesis of Vedānta; and it deserves our attention more than anything else as attested even by a great authority like Gauḍapāda. If physical sciences explore the outer, objective world, Vedānta explores the inner, subjective world. Vedānta, thus, is the science of the subject and follows the discipline of presentation of its results-hypotheses, evidence, conclusions-as much as do the physical sciences. That the nature of evidence in Vedānta differs from that of physical sciences, nature of evidence changes with that of the subject. Discoveries of Vedānta are not a matter of belief, but

of reality.

Values and Scientific Reality

This explains why ethics cannot be linked with scientific reality. What Tilak has done is to take the scientific reality as the basis for ethics may be out of his keenness to find a basis for ethics in Indian philosophy which, by common consent, is aloof of ethical deliberations. This is mixing up willed cognition with true cognition. Values that make ethics are a matter of will which changes from time to time, place to place, and society to society. Scientific reality is the same for all. In Tilak's view, cognition of the ultimate reality from's the basis of Indian concept of social duty. How can our status in the world of everyday business form the basis of our behaviour in a drama or a dream? To come to details, how can Arjuna fight his adversaries with an outlook of equanimity towards friends and enemies which, according to BG, characterises an enlightened man? In the events that follow BG, he has behaved in the same manner as any normal warrior would. And Kṛṣṇa, too, has played all tricks as practical man would. What proof is there that they have done all this in the perfect manner of KY, i.e., in a detached manner not claiming or caring for the results? if events in the subsequent story are to be taken as indications, there is every reason to believe that the two were as normal as any man of the world. The only possible conclusion is that they were not enlightened in the Vedāntic sense of the term, in case we treat the events and personalities associated with BG as historical.

Stories as Frameworks

But what if we do not? Stories in philosophical works are just frameworks meant for providing an occasion for the presentation of the teaching. They serve an ornamental purpose to induce the reader to read them. Many of such stories (e.g., the story of Naciketas and Yama in the Kaṭha Upaniṣad) are obiviously imaginary; and the rest are presumably so even though they involve characters which smack of historicity. In other words, they are myths created by will; and no myth can be entertained as a proof in scientific discussion. It follows from this that the example of Janaka cited in BG and taken as a support for post-enlightnment KY is no evidence.

The Test of Enlightenment

Then, what decides that a man is enlightened? Nor certainly his affidavit. If such a proof is admissible, any man can make a claim to enlightenment. This is unscientific. It is the presence of the characteristics of the enlightened man which are described in BG and other Vedāntic works and are logically linked to his state that decide whether or not a man is enlightened in the Vedāntic sense. If Tilak's view is admitted, there would hardly be a man or woman of any profession including that of a sharebroker on the lines of the YV who cannot claim to be enlightened! Viewed from his angle, even Yājñavalkya, acclaimed to be the greatest philosopher of Upaniṣadic times, cannot be called enlightened; for he himself has confessed that he is not a *brahmiṣṭha,* but only *gokāma,* and he had a large property to divide between his two wives. Admirers of recent great personalities like Vivekanand accord to them the honour of Vedāntic enlightenment. This is not more than an indication of the appreciation of their great work and stands on an

equal level with raising memorials of, or naming streets after, great men. Greatness or such other attributes have only a social significance which mean nothing for a man of enlightenment.

Jñāna-Intellectual Experiential

One wonders what led Tilak to base his ethics on Vedāntic enlightnment? The term *jñāna,* which according to Vedānta, is the only means to liberation has a number of connotations in different contests even in Vedāntic works. But when it is said to be the means of mokṣa, it means experience - *sākṣātkāra,* as distinct from intellectual understanding or conviction. Despite his knowledge of this distinction indicated in his writing, Tilak seems to have taken this term in the latter sense (i.e., intellectual understanding) which does not militate against ethical considerations. The great teachers of Vedānta from Yājñavalkya to Vasudeva Shastri Abhyankar of our own times who were mostly householders and also great scholars who no doubt devoted their lives to teaching and writing on Vedānta, made no claim to enlightenment; and even if one did, such a claim would only contradict itself, implying the existence of his personal identity which is a sure indication of his not being enlightened.

Thus, with all respect for Lokamanya Tilak's erudition and untiring scholarly work for six years, it is logical to say that the philosophy of BG and the path of Swarajya do not hang together.

B. G. Tilak's Assumption of a Kārikā in the Sāṅkhyakārikās

Shailaja Bapat

B. G. Tilak, the author of monumental books on the Vedas and the Bhagavadgītā (one of the famous *prasthāna* of the Vedānta system) has made a scholarly contribution to the study of the Sāṅkhyakārikā of Īśvarakṛṣṇa. In his erudite article entitled 'A missing verse in the Sāṅkhyakārikā published in the 'The Sanskrit Research' journal (Oct. 1915) Vol. i. No. 2 pp. 107-117) restored a kārikā 62 missing in the Sāṅkhyakārikā (SK). It is critically reviewed in the present paper. The SK of Īśvarakṛṣṇa is an ancient and unique treatise of the well-known and famous Sāṅkhya system. Therefore there are number of commentaries upon the SK. A mention can be made to the Māṭharavṛtti. Gauḍapādabhāṣya, Yuktidīpikā, Sāṅkhyatattavakaumudi and the Suvarṇasaptati (translated into Chinese by Paramartha). Besides, the SK is studied and criticized by the Buddhists like Vasubandhu and Diṅnāga. It indicates its deep influence on the philosophers of different Indian systems. A study of the SK text with its commentaries show that the SK text requires a critical edition. In this respect, Lokamanya Tilak has made a praiseworthy attempt at restoring the missing *kārikā*. Let us see the Lokamanya Tilak's arguments for restoring the missing *kārikā* and its authenticity and its status in the

SK text.

The seed of restoring the kārikā No. 62 :

Īśvarakṛṣṇa, the author of the SK condensed the Sāṅkhya philosophy in the text known as ṣaṣṭitantra in the seventy Āryās. It is come to know in the following verse :-

सप्तत्यां किल येऽर्थास्तेऽर्थाः कृत्स्नस्य षष्टितन्त्रस्य ।
आख्यायिकाविरहिताः परवादविवर्जिताश्चापि ॥ ७२

Lokamanya Tilak struck to the word 'सप्तत्यां' in the kārikā seventy two and started his query in to the Gauḍapādabhāṣya GB on the *kārikā* number 61. He argues in his thought provoking article in the following lines - 'This evidently means that the main or the doctrinal part of the book (i.e.excluding the concluding three Āryās) consisted of seventy verses. But on the other hand, if we exclude the three concluding Āryās there remain only sixty nine. Again if we look to the Gauḍapāda's commentary we find that it ends with sixty-ninth verse and yet Gauḍapāda at the end expressly states that there are seventy *kārikās* in the text.'

Further more B.G. Tilak points out that the Western scholar H.H. Wilson, noticed this discrepancy. He quotes Wilson - 'We have here in the text reference to seventy stanzas as comprising the doctrinal part of the Sāṅkhya philosophy. In fact however there are but sixty nine'.

Lokamanya Tilak further adds to it by taking into account the Chinese translation of the Suvarṇasaptatiśāstra by Paramartha consists of 71 *kārikās*. Regarding it he remarks that sixty third *kārikā* (in Wilson's edition) is omitted in the Chinese. This

omission is evidently an error for as observed by Dr. Takakusu the verse is found in the Sāṅkhyasūtra iii. 73 and also in the Bhāṣya of Gauḍapāda. If we supply the omission the Chinese version will have the same seventy two kārikās as in the Wilson's edition.

Lokamanya Tilak further argues, 'Another remarkable fact is that the *kārikās* are called Āryā-saptati in Sanskrit and are denominated Suvarṇa-saptati. (The gold-seventy) in the Chinese. It confirms that the doctorial part of the work is stated in the seventy stanzas.

Besides, Lokamanya Tilak supports his arguments for seventy verses of the SK, by referring to manuscript of the Māṭharavṛtti (MV), that contains seventy two verses as in Wilson's edition. Similarly the Sāṅkhyatattvakaumudi (STK) of Vācaspati Miśra also contains seventy two verses. Having observed the Commentaries on the SK, he concludes that there are seventy two verses in all the copies of the SK. Thus the doctrinal part of the book at present contains sixty nine verses only where as verse no. seventy two expressly tells us that there are seventy verses in the work. No satisfactory solution of this difficulty has to my knowledge yet been published.'

At this difficult juncture Lokamanya Tilak tries to find out the solution the missing *kārikā* in the SK. He restored the missing *āryā*, such as-

कारणमीश्वरमेके पुरुषं कालं परे स्वभावं वा ।
प्रजाः कथं निर्गुणतो व्यक्तः कालः स्वभावश्च ॥

In this regard, he finds out a clue to this missing verse by referring the sixty first kārikā and Gauḍapāda Bhāṣya on it. (Wilson's edition),

Lokamanya Tilak focuses our attention on to the GB on the verse portion - 'प्रकृतेः सुकुमारतरं न किञ्चिदस्तीति' in sixty one. It concludes with the sentence तस्मात् प्रकृतिरेव कारणं न प्रकृतेः कारणान्तरमस्तीति । अतः प्रकृतेः सुकुमारतरं सुभोग्यतरं न किञ्चिदीश्वरादि कारणमस्तीति मे मतिर्भवति ।

Lokamanya Tilak concentrates his arguments on the words सुकुमारतरं in the *kārikā* number sixty one. He says, 'The comparative degree (सुकुमारतरं) here used shows that the writer of the *kārikās* must have in his mind some other ulterior causes of the world, mentioned by other philosophers. What could these be? There is no stanza in the present text which would elucidate this point. Yet Lokamanya Tilak tries to give the solution by restoring the verse on the basis of the interpretation of the *kārikā* number sixty one, according to GB. It provides him the ground to restore the missing verse. Lokamanya says, "the point is cleaned up by mentioning four subtler causes advocated by others, namely Īśvara, Puruṣa, kāla (Time) and Svabhāva (Nature)". He further says, "Now as I was reading this Bhāṣya, it struck me that all this discussion about could not have been inserted in the Bhāṣya by Gauḍapāda on his own responisibility". According to Tilak, Gauḍapāda's words 'तत्र सुकुमारतरं वर्णयति' doesn't refer to the Bhāṣyakāra. He takes into account the enuniciation of the different doctrines regarding the ulterior cause of the world in the words 'ईश्वरं कारणं ब्रुवते'-- and the reply in the Bhāṣya, is introduced by the phrase 'अत्र सांख्याचार्या आहुः'. The words in the Bhāṣya, used for explanation of the words 'प्रकृतेः सुकुमारतरं' in the *kārikā* number sixty

one, according to Tilak look like excerpts or *Pratīkas*. He says, "In other word Gauḍapāda here seems to have before him a verse in the text which explained why Prakṛti was called 'सुकुमारतरं' in the verse sixty first stanza. This leads me to conclude that in the original *kārikā* there must have been a verse following the 61st and explaining why prakrti was there in called 'सुकुमारतरं'. Taking my clue from the underlined words in the Bhāṣya above given. I would therefore, reconstruct and restore the now missing Āryā as follows-

कारणमीश्वरमेके पुरुषं कालं परे स्वभावं वा ।
प्रजाः कथं निर्गुणतो व्यक्तः कालः स्वभावश्च ॥

After restoring the missing 62nd verse Tilak says, 'Unless therefore, we supply a verse like the above the doctrinal part of Sāṅkhya Kārikās would be seriously defective, not to mention that one Āryā would be wanting to complete the number of seventy Āryās said to be originally comprised in the book.

B. G. Tilak after restoring the verse restoring to the Gītā Bhāṣya considers a genuine question. But it may fairly be asked if the part of Bhāṣya relied upon is genuine. In this regard he considers Dr. Takakusu's French translation of Chinese version of the *Kārikās* and the commentary referred to above. B. G. Tilak remarks on the Chinese version of the Sāṅkhyakārikā with commentary. It seems clear therefore, that the commentary which was rendered into Chinese by Paramārtha in the early part of 6th century A. D. was in substantial agreement with the Bhāṣya Gauḍapāda.

Furthermore, B. G. Tilak refers to the ms of MV. He

maintains that he Māṭharavṛtti agrees more with the Chinese commentary than the Bhāṣya of Gauḍapāḍa does. Thus, B.G. Tilak proves the authenticity of the origin of the restored kārikā from the Bhāṣya.

B.G.Tilak has discussed the reason for the fropping the kārikā restored by him from the text. He say, - 'Īśvarakṛṣṇa' was in my opinion a thorough निरीश्वरवादी that is recognizing nothing beoynd पुरुष and प्रकृति. But it seems that later attempts were made to explain his *kārikās* consistently with as Vijñāna Bhikṣu has done in his Sāṅkhyasāra Īśvarakṛṣṇa in the hands of these commentators thus became as Vedantist and then it was, I think, that the verse originally following the 61st was dropped and the commentary there on that is the old commentary सुकुमारतरं वर्णयति etc. was tacked on to the 61st verse.

Thus, Tilak maintains that the kārikā restored by him is in accordance with the Īśvarakṛṣṇa doctrine of Prakṛti that denies Īśvara, kāla as the causes of the world. He says- 'It is an essential part of the Sāṅkhya doctrine not to recognize any cause of the world subtler that *prakṛti*... and that the subject is noticed twice in the old commentaries on the *kārikās*. It is interesting in this connection to note that the Arab writer Alberuni quoting from a Sāṅkhya book in the form of a dialogue dwells upon the same essential doctrine of the Sāṅkhya philosophy.

B.G.Tilak finally refers to the famous passage from the Śvetāśvatara Upaniṣad 6.1. It refers to Svabhāva, Kāla and Īśvara... The Sāṅkhya's reject all these and from the remaining two fix on PraLkṛti alone as the

final cause of the visible world. If Śvetāśvatara refers to this discussion there is no reason why the *Sāṅkhya kārikās* should not have originally contained a similar discussion of the subject. The number 62 kārikā restored by B. G. Tilak was remarkably noticed by the pandits and scholars of the Sāṅkhyakārikā. Haradaatta Sharma quoted by G.N.Jha in his 'translation of the STK, refers to the *kārikā* restored by B.G.Tilak. Vishnu Prasad Sharma in the Bhūmikā, in the MV takes into account B. G. Tilak restored *kārikā* and remarks that in this case the decision depends upon learned scholars.

However N. Aiya Swami Shastri in his introduction to Suvarṇasaptatiśāstra does not accept B. G. Tilak for his restoring the verse. He says 'Now I feel reluctantly compelled to contradict the theory of the Late Lokamanya B. G. Tilak who held that there ought to have been in existance one verse after the verse 61 of SK and constructed that missing verse form the observations made in GB and MV in exploring K 61. तत्र सुकुमारतं वर्णयति... A careful persual of the whole text of CHC will convince every one that no where its author explains any line of SK in the light of Vedantic views and as previously remarked it is MV later than 1000 AC, not even GB that does so. So there had been no incentive of any kind on the part of the author of CHC the earliest of all commentators to drop the alleged verse... It is therefore absolutely out of question to suppose with B.G.Tilak that CHC lends supports to theory of a verse being dropped after the verse 61 of SK (XIV -XIVI).

As it has been seen B.G. Tilak argued to restored the missing *kārikā* that the author motioned the number of *kārikā*s by the word *'saptatyām'* in the verse (72) while GB contains only 69 *kārikās.*

In this regard the counter arguments should be noted which are offered by Vishnu Prasad Sharma in his bhūmika on MV. He maintains that the word *saptatyām* in *kārikā* does not mean that there are exactly seventy *kārikās.* It is a style of expression of the round number in the title of the work. Vishnu Prasad Sharma refers to such titles of the books which do not contain the same number of verses in the same book. For example, the Paramarthasāra of Śeṣa entitled आर्यापञ्चाशीति contains eighty seven Āryās. It excludes the Āryās about the name of the author and the mention of the title of the work and title Āryā pañcaśīti refer to only the theory of Vedānta. Therefore it is known as Āryā pañcaśīti. Accordingly Paramarthasāra or Abhinava Guptācārya contains 105 Āryās, excluding the three Āryās in the beginning and the two Āryās which are concluding the Siddhānta is contained in the hundred verses author himself says about this work- आर्याशतेन तदिदं संक्षिप्तसारमति-गूढम्. In the same manner the title सांख्यसप्ततिः or सुवर्णसप्ततिः should not be understood as denoting the exact number of Āryās in the book.

In this regard mention can be made to the STK of Vācaspati, Vācaspati interprets the part सुकुमारतरं न किञ्चिदस्तीति in the kārikā unlike in the other commentaries. Vācaspati says, सुकुमारतरताऽतिपेशलता परपुरुष दर्शनासहिष्णुतेति यावत्. He does not take into account other's

theories of cause of the world.

Besides it would be proper to pay attention to the remaining part of verse. 'आख्यायिकाविरहिताः परवादविवर्जिताश्चापि.' In this part of the verse the author specifically proclaims that the seventy verses exclude the illustrative stories and the doctrines of the opponents (Accordingly in the 71st *kārikā* the author says ईश्वरकृष्णेन् चैतदार्याभिः in general, without mention of the number of Āryās.)

Thus the author of the *kārikā* does not discuss or refer to the opponent's theories but he takes interest in the brief exposition of the Sāṅkhyasiddhāntas occurring in the Ṣaṣṭitantra text. The words परवादविवर्जिताः and आरख्यायिकाविरहिताः may indicate that the Ṣaṣṭitantra might have the illustrative stories and the account of the opponents doctrines which are excluded in the seventy Āryās. However the illustrative stories and the account of opponents doctrines in the Ṣaṣṭitantra were succeeded in the tradition of commentaries on the SK such as MV, GB and the Chinese commentary by Paramārtha. They had taken into account the paravādas in their own commentaries on the verse number 61 on the basis of which B.G. Tilak construed the Āryā number 62. It can be said that the restored *kārikā* by B.G.Tilak may be part of Ṣaṣṭitantra in spite of the Sāṅkhyakārikā.

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Lokamanya Tilak : The Philosopher

Shripad Bhat

The awakening of the Hindu society in the whole India and particularly in Maharashtra is intimately connected with the name of Lokamanya Bal Gangadhar Tilak, one of the greatest sons of Maharashtra. His influence was great, not only as a nationalist and Politician, but also as an Indologist and a Philosopher.

Gītārahasya, the marvellous work of Tilak, gives much stress on philosophical thoughts. This was not written just with the help of ancient commentaries, but he had gone through Upaniṣads, alomost all the systems of Indian Philosophy, the great epics Rāmāyaṇa and Mahābhārata and the Purāṇic literature.

Tilak's greatest work is the 'Śrīmad Bhagavadgītārahasya' or 'Karmayoga Śāstra'. The title means in English 'The secret of the venerable Bhagavadgītā or the science of the 'Discipline of Action'. Gītārahasya is not a work expounding sectarian doctrines nor a commentary in the fashion of ancient commentators. Tilak is an expositor of the Gītā, expounding deep 'Humanitarian Religion', especially throwing light on its practicle aspect, beside its familiar spiritual one.

यतः अभ्युदयनिश्रेयससिद्धिः स धर्मः [Vai. Sū. 1.1.2]

"that is duty which brings about material prosperity

as well as spiritual good".

This definition of Dharma (duty), it seems, was always before Tilak as guidepost. The Gītā has praised king Janaka as an ideal illustration of this

धारणात् धर्म इत्याहुः धर्मेण विधृताः प्रजाः ।
यत्स्यात् धारणसंयुक्तं स धर्म इति निश्चयः ॥

Mahābhārata 12.110.11

The word 'Dharma' is derived from 'the root 'Dhr'. Society is sustained through Dharma. So that, in true sense, Dharma is that which performs the function of sustaining (the society)". This was Tilak's view of Duty.

For Tilak, Dharma is the religious precept. Performance of one's duty paves the way to spiritual happiness and release.

Hindu tradition refers to four main purposes or goals in life. i.e. Dharma (Duty), Artha (wealth), Kāma (pleasure) and Mokṣa is taken as separate purpose, while Dharma as Tilak remarks is restricted to worldly, social and moral duties. It concerns 'the maintenance of the society' (samājadhāraṇā) and the welfare of all (sarvabhūtahita). Though the Tilak stressed the social implications of Dharma, he also pointed out that if these externally useful principles obstructg the release of the ātman, (then) we do not want them". (GR. p. 62 (m); pp 91-92 (E).)

For Tilak, Dharma is not based on human conventions; it is the expression of eternal law of being. If it ceases to be observed, the bonds which hold society together are loosened. Society is then like a planetory system without the force of gravitation which holds it together or like a ship at sea without a

rudder. (GR. p. 67 (m); p. 90 (E).)

The caste-system in India is based on the division of labour necessary for the healthy functioning of the society. Every person finds his Dharma laid down in the precepts of the caste to which he belongs. Caste, in its turn, in Tilak's explanation, is based on individual talent. Even where a caste-system does not exist, society cannot despense with the duties, which in Hindu society are assigned to the different castes. Each person must perform the duty which has fallen to his lot through defacto arrangement of society or by one's own free choice. Thus non-Hindus too can become Karmayogins.

Tilak did not disapprove that the Gītā brought about a reconcliation of 'Knowledge, Action and Devotion' (ज्ञान, कर्म, भक्ति). What was, however, important, was to which one of the three, he attached primacy. concisely, he views the Gītā as a religious text expounding 'life of action with Basis in knowledge and Stress on Devotion (ज्ञानमूलक भक्तिप्रधान कर्मयोग). Here, the substantive 'Life of Action' he qualifies with the word 'Desireless' or 'detached'. Hence his most condensed description of the final teaching of the Gītā is- 'Desireless Life of Action.'

Mahatma Gandhi has treated the Gītā as a text book on the 'Life of Detachment Yoga' (अनासक्तियोग) Lokamanya Tilak, on the title page of his Gītārahasya quotes the verse from the Gītā.

तस्मादसक्तः सततं कार्यं कर्म समाचर ।
असक्तो ह्याचरन् कर्म परमाप्नोति पूरुषः ॥ 3.19

"Hence tirelessly perform assigned duties with a

detached mind; for so doing the duties, man attains the highest reward". 'Desireless Life of Action' of Tilak is the same as the 'Life of Detachment' of Gandhiji, though with a subtle distinction between the two. Gandhiji's theorization which is based on truth and non-violence demands utmost purity of conduct, as both untruth and violence motivated by some kind of attachment of objects, or rewards in mind, and hence purity of means (साधनशुचिता) becomes necessary. It is different with the "Disireless Life of Action" Truth or untruth and violence or non-violence are to be contextually decided and adopted accordingly; even falsehood and injuriousness become lawful and righteous if circumstances demand those. (Lokamanya Tilak as Educational Thinker, P.52.)

Tilak's firm faith in the key-teaching of the Gītā i.e. Desireless Action, said in the stanza-

कर्मण्येवाधिकारस्ते मा फलेषु कदाचन ।
मा कर्मफलहेतुर्भूः मा ते सङ्गोऽस्त्वकर्मणि ॥ Gītā 2.47

"Your authority extends only as far as doing the duty, it is not within your purview to think of the frut thereof; hence, never keep your eyes upon the results of your action; nor insist on 'not doing' the action". (Ibid. p. 46.)

This stanza through its four lines, which are beautifully complementary to each other, makes a wonderful quadruplet (चतुःसूत्री) for the philosophy of 'Life of Desireless Action', Tilak's commentary on this stanza is worth constant conteplation. He says, after stating that one must stop at doing duty, there is natural expectationof one's rightfully enjoying its fruits also. So, the next line is needed to clarify the thought

and also the third line asking not to be motivated by the fruit while doing the duty. The last line exphasizes one's not abondoning action and asks never to entertain such a thought, for one must do the assigned duty, at all cost. 'Duty one must never run away from, neither perform it with attachment' is thus the gist of this Śloka.

This 'Desireless Duty' that is taught here is an introduction to the 'Steadied Intellect' referred to in the following-

प्रजहाति यदा कामान् सर्वान् पार्थ समागतान् ।
आत्मन्यैवात्मना तुष्टः स्थितप्रज्ञस्तदोच्यते ॥ Gītā 2.55

'When one casts away all be longings of the mind' and gets connected with one's own state, then one is called as स्थितःप्रज्ञः (Steadied Intellect). (Ibid.)

Tilak believed in 'Virtuous life'. He gave much stress upon the principle 'धर्मो रक्षति रक्षितः' "Religion if practised, protects the life of man". This is the principle at the base of righteous life.

परित्राणाय साधूनां विनाशाय च दुष्कृताम ।
धर्मसंस्थानापनार्थाय संभवामि युगे युगे ॥ Gītā 4.8

"For protecting the righteous and for annihilating the vicious, I take birth in each and every age" This promise from Lord Kṛṣṇa clearly makes room for violence where needed. These very words form for Lokamanya Tilak, the base of the 'Life of Action' in his strugle for freedom.

Tilak's views on life and duty rested on the eternal law (सनातन धर्म) and theistic faith. While propagating, in practicle life, the 'Desireless life of Action' he believed in 'Final delivarance' as the ultimate aim of man's action.

His Gītārahasya gives much stress on philosophical thoughts. Much space is given to the explanation of the concepts found in the Sāṅkhya and the Vedānta systems. We read the genealogical tree of the cosmos which explains how various elements are given in the Ṣāṅkhya, Vedānta and Gītā explantions. These were not just enquiries into systems of the past, but were meant to explain how the cosmos developed out of the one *'Parabrahman'*.

In Tilak's view, the Gītā follows in its metaphisics the school of Śaṅkara, there is one absolute being which is pure being, pure intelligence, and pure bliss. It exists in absolute unity, and is devoid of any imperfection or limitation. The individual selves and the world cannot be comprehended apart from one absolute being compared with which they are illusion, *māyā*. They are not absolutely nothing, neither are they being in its fullness (सदसद्विलक्षण). They are nothing by themselves; their whole reality is dependent upon *Brahman*.

Tilak's main interest was not in metaphysics as such, but in metaphysics as a basis for ethics. The text of the ancient poet quoted by Tilak summarises the substance of his metaphysical outlook.

श्लोकार्धेन प्रवक्ष्यामि युदुक्तं ग्रन्थकोटिभिः ।
ब्रह्म सत्यं जगन्मिथ्या जीवो ब्रह्मैव नापरः ॥

Tilak translated thus, 'I will explain in half a stanza the summary of a million books- 1) Brahman is reality; 2) the world, that is, all the names and forms in the world are false (mithyā) or pershable; and 3) the ātman of man and Brahman are fundamentally one and the same, and not two.

Brahman, therefore, is the one absolute reality. No other philosophers from any other country have yet found an explanation which is more reasonable than the one given in our ancient teachings about the existance of a substance, which is unbounded by time and place, and is immortal, eternal, independent, homogeneous, sold, immutable, all-pervasive and quality less. (G.R.P.210 M.; p. 292 E.) This element, the all perfect, absolute being, *Parabrahman* is without name and form. It is free from any quality which can be perceived by us; but it is, in the views of Tilak, not absolutely without qualities. One may ask a question, 'Does this make *Parabrahman* qualified? No, according to Tilak, *saguṇa* refers only to qualities knowable by human reason, not to those which human reason cannot know.

For Tilak, the Ātman of man is identical with the *Paramātman*. The Ātman is a part of it in the same way as etiher in thehouse or in the earthen pot are parts of an all-pervading ether. (G.R. P. 244 m; p. 330 E) Realising the unity of Ātman and Brahman means knowing Brahman. (GR p. 247 m; p. 334 E.). Tilak calls this unity Brahmātmaikya (GR p. 274 m; p. 382 E.). From illustration like this, it is clear that for Tilak, unity meant identity; though he spoke often of the existence of *Parabrahman* in all being, not mentioning the identity with them.

One may ask a question how can man come to the knowledge of *Parabrahman?* For Tilak, reason has the power to recognise that the usual definition of God as Sat-Cit-Ānanda is the best possible definition of God; but reason cannot proceed further. In the

philosophy of the absolute self no inference can be established as certain with the help of reason alone. (GR. p. 224 m; p. 312 E.). *Parabrahman* can be reached by experience alone. For experience Tilak uses the words *anubhava* (experience) (GR. p. 231 m; p. 322 E), *svānubhava* personal experience (GR. 229 m; p. 318 E), *aparokṣanubhava* (direct experience) (GR. p.227 m; p. 315 E) *ātmapratīti* (clear apprehension of the soul) (GR. p. 224 m; p. 312 E) and *sākṣātkāra* (first hand experience) (GR. p. 227 m; p. 312 E.). The content of this experience is brahmātmaikya, the unity of Brahman and Ātman.

Although a pious and religious person, he never opted for adopting rituals of religious worship in any of his activities. He principally believed in analytical thinking and flexible application of the laws of conduct (धर्मतत्त्व). He was a man who could swallow whatever fell to his lot, with spirit undaunted. (प्राप्तं प्राप्तमुपासीत हृदयेनापराजितः ।) He strived for universal good and translated philosophy into action. Thus Tilak had played a vital role in the development of Indian Philosophy.

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Tilak : Not any Goldman but a Golden Man (Suvarṇapuruṣa).

M. G. Dhadphale

When he is Dr. Jecyal he is not Mr. Hyde. Not both at one and the same time. This is a clear-cut instance of a split personality. A personality divided in two. It is one-half, a matter of substraction and thus a pathological sign. A healthy sign is seen in a 'multiple personality;' a combination of many in one. Thus Tilak was a patriot, a polotician, a social worker, an educationist, a mathematician, a sanskritist, an astrologer, and even a student of medicine; many in one.

We read, not that we do not read. But we do not think when we read. We know that the Ṛgveda speaks of a day and a night of six months and take it only, as an 'ancient divine fantacy'. Tilak can probe into it to find in it a geographical reality, which once possibly existed in the Arctic region and this thread he wove skillfully to form a real and rare piece of Vedic research. We read Īśvarakṛṣṇa's Sāṅkhya-kārikā but do not much bother ourselves in counting the number of kārikā-s. We are told that the Chinese rendering of it is Golden Seventy (Suvarṇa - saptati) but hardly do we ask ourselves why Suvarṇa or Gold' (any reference to the Golden-embroyo-Hiraṇyagarbha as explained by Śaṅkara in his gloss on Ṛṣi Kapila in Śvetāśvatara Upaniṣad, the historical promulgator of

the Sāṅkhya-system?) Do we take care to see whether 'Seventy' is a reference to an actual figure or merely a gross reference to the literary genre of presenting the matter in Seventies. If the latter is the case then it hardly matters if it is only nearly seventy; one more or one less. We have Śataka-s (centuries) of 98 or 102 verses. We just make it a round figure and certify it as a Śataka, *a la mode de* auditor. Moreover do we any time think why there should be an inordinately lengthy comment only on a single kārikā'. The glaringly conspicuous length of Bhāṣya on one single kārikā stirred Tilak's discerning notice. We know that Sāṅkhya was an atheistic thought-current but do not care to ask why no reference to this cardinal tenet should be not there in a comprehensive and systematic exposition of Sāṁkhya such as the work of Īśarvakṛṣṇa?

Well, this is all the difference between us and researcher's like Tilak. Tilak attracted the appreciative attention of F. Max Müller by his unique writing on "Arctic Home in the Vedas". The Indians admire him because of his Karmayogic exposition of the 'Song Celestial'. His Orion created for him a permanent place in the hearts of astrologists. For a student of Sanskrit like me his article on "A Lost Sāṅkhya-kārikā" is an ideal demonstration of a radical, penetrating and ingenious instance of oriental research as contemplated in the 'Aims and Objectives' of the Constitution of the Bhandarkar Oriental Research Institute.

If I write on this topic only briefly it is only because it is not necessary to write in details as the subject is

discussed in this very volume by Dr. Smt. Shilaja Bapat. Already a good article on it has appeared long back in 'Poona Orientalist' and Dr. Sūryanārāyaṇa Shastri has taken due notice of Tilak's argument in the introduction of his (Shastri's) edition of the Sāṅkhya-kārikā.

The tradition says that the incomplete text of Bhavabhūti's Mahāvīracarita was completed by one Subrahmanya Shastri, Bāṇa's Kādambarī left incomplete because of the author's demise was ably completed by his worthy son Pulinda-Bāṇa in such a way that the readers do not feel that the author is changed in the concluding portion of the Kathā. We have to admire Tilak for his successful attempt of reconstructing the lost Sāṅkhya-kārikā by piecing together the key-words he could find out in the unusually long-drawn gloss of Gauḍapāda on kārikā no. 61. And Tilak restored the matter in the same Āryā metre, uniformally used by the author of the Sāṅkhya-kārikā. The text of the restored kārikā runs like this :

कारणमीश्वरमेके ब्रुवते, काले परे स्वभावं वा ।
प्रजाः कथं निर्गुणतो व्यक्ताः कालः स्वभावश्च ॥

This was the reading he presented in his Gītārahasya. He himself subsequently in his special article on the subject (Sanskrit Research, now a defunct magazine) modified the first quarter and read it as "कारणमीश्वरमेके पुरुषम्..." This he must have done on the ground that the Gauḍapāda-bhāṣya and the Māṭhara-vṛtti both mention puruṣa as an alleged cause. It is interesting to note that Pt. Har Dutt Sharma independently of Tilak suggested the same

ammendment (Indian Historical Quarterly. V. 3. p. 421 ff.)

Tilak constructed (or restored?) by culling key-words found the Gauḍapāda's bhāṣya on kārikā 61 which discusses at long lenth various alleged casuse of the universe.

The two main factors which urged Tilak to do this are i) Bhāṣya of Gauḍapāda gives us only 69 kārikā-s whereas the Chinese title speaks of "Golden Seventies" (Suvarṇa-saptati).

ii) The Bhāṣya of Gauḍapāda on kārikā 61 is inordintely prolix and discusses the possiblity of such alleged causes of the universe as Puruṣa, kāla, svabhāva, etc., which are not only not mentioned in the Verse 61 but are not even faintly hinted at.

At the back of his mind Tilak must have been wondering as to how the evidently atheistic stand-point of the Sāṅkhya-s is nowhere mentioned in the kārikā-s. It is true that scholars like Pt. Har Dutta Sharma disagree with Tilak maintaining that it is not necessary to postulate a kārikā on the basis of the unintelligible part in the long discussion of 'various possible sourses' discussed in his commentary by Gauḍapāda. Prof. Sharma thinks that atleast in its Chinese version the Bhāṣya on kārikā 61 does not appear to be irrelavent in the context.

S.S. Sūryanarayan Shastri in his article "on the missing kārikā in the Sāṅkhyasaptati" (Poona Orientalist. Vol. II, No. 2 July 1937. pp. 65-74) argues differently. He considers the existing kārikā 63 as an 'intruder' and is ready to ignore the last two kārikā-s beginning with "saptatyām kila ye arthāḥ as not

genuine verses of Īśvarkṛṣṇa on the evidence of Parmārtha and thus reconsciles the existing 73- intruder 63- the last two being not from the pen of Īśvarkṛṣṇa. The figure 73 minus 3 comes to exact 70.

Well, much can be argued from the side of Tilak and the two who did not agree with him. I am still inclined to Tilak's view for it alone can explain the 'missing' reference to one of the cardinal tenets of the Sāṅkhya thought i.e. its stern etheism. If we do not accept Tilak we will have to charge Īśvarkṛṣṇa for a grave omission.

Tilak's restoration of a glaring omission in the Suvarṇasaptati or "Golden - Seventy" should deserves to be weighed in gold. The late Gopalrao Deuskar word's eminent portrait-painter drew Tilak's life in murals in the Tilak-smarak-mandir. I asked him why he has pictured Tilak in gold. First he became serious, Then he smiled. put his hand on my shoulder and said "My dear lad, Tilak was PURE GOLD. His painting admits only a golden colour. A golden colour for a Golden Man.

धनं संशोधनाख्यं यो व्यतरद्विबुधे जने ।
तस्मै स्वर्णस्वरूपाय तिलकाय नमो नमः ॥

The Aśvattha Tree : A Note

P. G. Lalye

It is well-known that the Supreme Reality or the Brahman is described as allpervading, permeating the elements, the beings and on the moving and stationery objects. In the Upaniṣads, many figurative expressions or metaphors are used to convey the Omnipresent or Omnipotent nature of the Brahman. The metaphor is mostly a word or a phrase, indicating an object in the light of some other word or a concept. It is proposed to discuss the metaphor of Aśvattha tree in three different Sanskrit philosophical texts, dealing with the Brahman.

1) The old metaphorical description is in the Kaṭhopaniṣad (II.ii.i.)

ऊर्ध्वमूलोऽवाक्शाख एषोऽश्वत्थः सनातनः ।
तदेव शुक्रं तद्ब्रह्म तदेवामृतमुच्यते ।
तस्मिँल्लोकाः श्रिताः सर्वे तदु नात्येति कश्चन ।

The Aśvattha tree is pure Brahman. All the worlds are down wending branches of that Cosmic tree :-

2) द्वाविमौ पुरुषौ लोके क्षरश्चाक्षर एव च ।

The same metaphor, we come across in the Bhagavadgītā. But there is a vital difference between the two metaphors. In the Gītā Aśvattha tree is nourished by the Guṇas. This suggests that the expansion of the world takes place in accordance with the nature of the three Guṇas. The sense objects are its sprouts. This means that the senses become

active owing to the influence of the three modes or Guṇas. They manifest their tendencies towards the objects of sensuous enjoyment as they are naturally turbulent.

This tree has got infinitely multitudinous roots and they go on extending in the form of human beings. This tree grows vastly or infinitely. This Aśvattha tree, unlike the one in the Upaniṣads, is well nigh, a tree of empirical world, mostly a worldly phenomenon, marked by all its drawbacks, like attachment. The Gītā exhort the people to cut off this tree. Attachment is the main support of this tree. If one has to realize the Supreme one should remove this obstacle of the tree. The attachment is to be removed for which the entire tree is to be cut off with sharp weapon of non-attachment. When this parasite growth is removed, the brilliance of the Supreme abode is revealed. Then one should try to seek for reacting that abode. It is a sense of enlightenment, free from only activity-sensuous or otherwise, from which the entire, timehonoured creation preoceeds. Once that abode is attained, there is no return. It is the Primordial spirit or person (Ādya) from which all types of existences spring up.

Lokmanya Tilak's interpretation

While interpreting this verse, Tilak thinks that this is an attempt at harmonizing the Vedic and the Sāṇkhya doctrines. But Prof. R. D. Ranade, on comparing the two views, remarks that the passages are more or less antagonistic in nature. (Tilak M. II. pp. 1135-38), Ranade R. D. pp 147-48) He has pointed out that the Aśvattha tree in Kaṭha up. is the

Brahman itself. So there is no question of cutting it off.

It may be stated that the aim of the Bhagavaḍgītā is to impart spirituo - ethical advice to Arjuna. He was exhorted to free himself from the worldly attachments and attain equanimity of mind. In fact, the Bhagavdgītā has garbed the Upaniṣadic concept in the Bhagavadgītā's own spirit of equanimity.

We may compare the metaphor of Aśvattha tree with the concept of a tree of desire´(Kāmadruma) which is (like the one in the Bhagavadgītā) of attachment.

3) The Mahābhārata verses almost echo the same concept of a tree which is to be cut off, is elaborated.

हृदि कामुद्रुमश्चित्रो मोहसञ्चयसम्भवः ।
क्रोधमानमहास्कन्धो विवित्सा परिमोचनः ॥
तस्य चाज्ञानमाधारः प्रमादः परिषेचनम् ।
सोऽभ्यसूयापलाशो हि पुरादुष्कृतसारवान् ।
सम्मोहचिन्ताविद्यः शोकशाखो भयङ्करः ।
मोहनीभिः पिपासाभिर्लताभिः परिवेष्टितः ॥
उपासते महावृक्षे सुलुब्धास्तं फलेप्सवः ।
आयासैः संयतः पाशैः फलानि परिवेष्टयन् ॥
यस्तान् पाशान् वशे कृत्वा तं वृक्षमपकर्षति ।
गतः स दुःखयोरन्तं यजमानस्तयोर्द्वयोः ॥

In the Bhagavadgītā, the Aśvattha tree is described as identical with the mundane existence. In the Śāntiparvan the tree is neither the tree of the Brahman nor that of the worldly existence. It is the tree of sensuous passions. Recognizing this, Vyāsa asks Śuka that bonds of delusion which are in the form of a creeper, are to be cut off by the weapon of non-attachment. Thus in the Bhagavadgītā and in the

Mahābhārata, the importance of non-attachment is emphasized. The tree is supported by ignorance. It is sprinkled by the blunderous carelessness (प्रमादः) in the Mahābhārata. The metaphor is a complex one, incorporating all the characteristics a passionate life. Thus the main aim of Kaṭhopaniṣad is to describe the Supreme Brahman while the Gītā and the Mahābhārata passages take the tree in the mundane sense of

सप्तशतीगुरुचरित्रसारग्रन्थे वासुदेवानन्दसरस्वतीमहोदयैः पुरुषोत्तमयोगस्य मीमांसामकार्षुः । तैः वटवृक्षस्य रूपकमेवं स्पष्टीकृतम्-

यतः संसारवृक्षस्य शाखाः ऊर्ध्ववर्तने मूलं चाद्वयःनान्तो तस्योपलभ्यते ।
अतः एव वृक्षोऽनाद्यनन्तं रूपं जगतः सूचयति ।

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Gītārahasya : The need of 21st Century

Kanchan Mande

Introduction

India is a very rich country, if one sees it from the viewpoint of its bounties Sanskrit literature. Vedic literature is the oldest available literature of the world. This is not the only peculiarity of it. But it is a thought content that plays a significant role. Vedic literature is the unique feature of India. It is said that the Vedic seers visualized those Sūktas, which are having different subjects. Because those Sūktas were seen and handed down by oral tradition. This Vedic literature is well known as Śruti literature. It seems that at that time the society was in a primitive form. One does not get certain rules and regulations regarding the society in that period. Of course, ther is the clear-cut mention of four Varṇas, but according to tradition that is also a letter addition, viz. in Ṛg. X.90 - the Puruṣasūkta. In the Śruti period the Upaniṣads come, which do not pay much attention towards these four either, or social rules in general.

Smṛti literature follows the Śruti literature. Etymologically Smṛti means memory. That which is composed after the Śrauta literature is known as Smṛti literature. Because unlike the Śruti literature, this literature is deliberately composed by the seers. It mainly prescribes the rules and regulations regarding the society. So in a way, Smṛti literature deals with the structure of the society. Bhagavad-Gītā

is also known as a Smṛti text. But the Bhagavad-Gītā has no resemblance with the Smṛtis of Manu, Yājñavalkya or Parāśara. Why is it then the Bhagavad-Gītā also called as Smṛti? Very simple answer lies in the etymological meaning of the word Smrti. In the Bhagvad-Gītā it is clearly mentioned that this knowledge was handed down traditionally from the Lord to Vivasvān, Vivasvāṇ to Manu and Manu to Ikṣvāku[1]. So in a way the authorship was accepted. Second thing is, Bhagavad - Gītā comes after the Śruti period. Third, in Mahābhārata itself iṭ is stated that when the war between Kauravas and Pāṇdavas was over, Arjuna asked Śrīkṛṣṇa to tell the Bhagavad - Gītā again. But Śrīkṛṣṇa was unable to repeat it. It suggests Smṛtitva of Bhagavad - Gītā.

Bhagavad - Gītā is a unique book which deals with Jñāna, Bhakti and Karma. These are means to the goal of human life. So almost all thinkers were fascinated by it, and find it as their point of consideration. Lokamanya Tilak wạs also not an exception to it and the result is Gītārahasya.

Gītārahasya :

Gītārahasya is the Marathi interpretation of Bhagavad-Gītā. Many interpretaions of Bhagavad-Gītā are available in different languages. There are many intepretations available in Marathi language also, but Gītārahasya is altogether different. Not only because the author is Lokamanya Tilak, the great freedom fighter, but on the whole, the treatment of the text is different. Lokamanya Tilak has prepared the

text in two parts. In the first part he has dealt with many subjects and in the second the translation is given. The subjects he has discussed start from the desire to know the Karman i.e. Karmajijñāsa and end in the path of devotion i. e. bhaktimārga. One may find it as a routine in Indian tradition, but it is not so. Lokamanya not only speaks of these typical traditional concepts, however, thoroughly examines the place of Bhagavad - Gītā in Indian tradition, its relation with other sacred texts like the Upaniṣads or Mahābhārata etc. and along with it compares Bhagavad - Gītā with Buddhism also. So this vast introduction of the text is larger than the translation of Bhagavad - Gītā. This is one of the unique features of the text. The introduction is of 548 pages, and the translation of 248 pages[2].

Why Bhagavad - Gītā?

There were so many texts other than Bhagavad-Gītā available to Lokamanya. The pinnacle of Indian philosophy, Upaniṣads were there. But Lokamanya chose Bhagavad - Gītā. Why? Bhagavad - Gītā is a rare type of text that crosses the boundaries of time and space. Usually anything is fit for particular time and space, but Bhagavad - Gītā is an exception to the fact. That is why like so many scholars Lokamanya might have fascinated by this text. It is very obvious that Lokamanya neither wrote the interpretation to exhibit his scholarship, not to show the faith in scriptures. But he might have thought that this text will serve the purpose of his life. The goal of his life was nothing else but the independence. It is very clear

from his biography that he was born for independence. Here everybody will immediately remember Lokamanya's famous statement that स्वराज्य माझा जन्मसिद्ध अधिकार आहे व तो मी मिळवणार. Because Lokamanya was an exception to a common man, he might not have written Gītārahasya with the simple faith in scriptures. At the same time he was aware of the fact that Bhagavad - Gītā is the most familiar text to the common man, in comparison with the other scriptural texts. Bhagavad - Gītā is composed in a lucid manner and so, at least for a literal translation there is no difficulty for a layman. Lokamanya also might have appreciated the purpose of Bhagavad - Gītā mentioned by Ādi Śaṅkarācārya as, the Bhagavad - Gītā is meant for a layman through the personality of Arjuna[3].

One point is noteworthy here. Many a times scholars think that Ādi Śaṅkarācārya and Lokamanya Tilak are opposite to each other, but if one would read Gītārahasya carefully, he would find it as a wrong impression. The relativity takes place here. Anything is apt for proper time and place. Ādi Śaṅkarācārya has given top most importance to the knowledge and read the Bhagavad - Gītā in the light of knowledge, that was perhaps the need time. Lokamanya on the other hand, has given importance to the theory of Karman, because it was a demand of time. The learned scholars are definitely aware of the time of Gītārahasya that makes clear of position of Lokamanya in placing the Karman at the top.

Lokamanya's Theory of Karman :

Lokamanya was very much aware while exposing the Theory of Karman, so he has taken into consideration the famous śloka from Bhagavad - Gītā has the base of his theory. It is mentioned there as "you are entitled to act, not for the result, but then don't become the cause of the result, and at the saame time don't cling to non-action[4].

Karman is the key word in Bhagavad - Gītā. According to it nobody lives without Karman, and if at all he thinks to do so, it is highly impossible for him, because Prakṛti is the source of all actions[5]. While explaining the inevitability of Karman, Bhagavad - Gītā declares breathing, smelling, drinking, speaking etc. etc. all these as Karman[6]. In a way, according to Bhagavad - Gītā life is almost impossible without the Karman, and at the same time Karman is relieved from the clutches of mere ritual. Lokamanya might have taken the cognitions of this approach of Bhagavad - Gītā, and might have elaborated his exposition of the theory of Karman. Karman is one of the reasons for birth. Impossibility of living without breathing, smelling, drinking, speaking etc. etc. leads to an unavoidability of Karman. So the real problem is, how to get rid of this Karman? Theory of Niṣkāma Karman comes to our rescue. Lokamanya has advocated the theory of Karman, adding one qualification as Niṣkāma. It seems that before him word Niṣkāma was not very emphatically used. But this very word changes the total appearance of the theory of Karman, and transcends the limits of time

and space. Do not negate or neglect any action, but at the same time do it without desire.

Niṣkāma means having no desire. According to some scholars Niṣkāma means having no greed. But etymologically also Kāma means desire and not greed. The greed loses descrimination. non-discrimination fells to choose between right and wrong, and a common man becomes totally unaware of the fact. This is the situation of complete bewilderment. Bhagavad-Gītā is the apt text to overcome this situation, and Niṣkāma Karma is pathway.

If there is no desire then, why should one act, and how to act without desire, these are the questions always come up in the discussion of Niṣkāma Karma. A very simple answer to the first question is, because acts are performed through the qualities i. e. Guṇas of Prakṛti[7] so in real sense of the term, nobody is the agent of an action, and for second question, Lokamanya himself is an idol. Most noteworthy point is that Bhagavad - Gītā is the text of life. One should experiment on oneself to get rid of the bondage i. e. the birth[8].

This specific mentality expressed in Bhagavad - Gītā and highlighted by Gītārahasya is most essental for 21st century. Because a human being has obtained all the pleasures possible in this world. But if the cross section of the society is taken into consideration, nobody is satisfied. This is a real tragedy of this century. On the one hand, all types of pleasures, and on the other, increased unsatisfaction.

No need to explain this situation anymore, and to overcome it no other text than Gītārahasya. The key word is Niṣkāma Karma. One must perform an act because there is no other alternative. But while performing it, one should keep in mind that it is ought to be done, so I am doing, and not because it gives me instant pleasure. Young generation here is not ready to accept 'no', is a common complaint. It is needless to say that elders are also not an exception. Why? Because nobody genuinely thinks of Niṣkāma Karmayoga. One should be very alert while performing any act. Bhagavad - Gītā has rightly use the word Dakṣa for Bhakta[9]. A layman does not understand. On the contrary, it is most useful for a common man. Sthitaprajña and Bhakta behave, as they ought to be. It is a common man who puzzles in behaving properly. That is why the Bhagavad - Gītā is meant for common man and it is the Gītārahasya that reveals its real nature to help a layman.

It is true that this is not an easy task, but one must start at some junction. One has to act with full concentration, and at the same time, should be aware of the fact that he is not an agent, but the means to the action. When one realizes it, neither a pain nor a pleasure shakes him. At the same time he does not neglect any action, major or minor. This is called as Niṣkāma karmayoga. Lokamanya might be really interesting in exploring Niṣkāma karmayoga in this manner. Lokamanya has written the Gītārahasya in the prison to awake the people for independence, but that was a time bound purpose, and to enlighten the people is an eternal purpose, that will be served time

and again when essential.

Foot Notes-

(1) इमं विवस्वते योगं प्रोक्तवानहमव्ययम् ।
विवस्वान् मनवे प्राह मनुरिक्ष्वाकवेऽब्रवीत् ।। भगवद्गीता- ४.१

(2) Bhagavad-Gitārahasya athavā Karmayogośāstra- Bal Gangadhar Tilak. Pub. - Mr. J. S. Tilak, 568, Narayana Peth, Lokamanya Tilak-wada, Pune-411002. ed IX (1968)

(3) तयोश्च कर्मसंन्यासपूर्वकादात्मज्ञानान्नान्यतो निवृत्तिः इति तदुपदिदिक्षुः सर्वलोकानुग्रहार्थमर्जुनं निमित्तीकृत्य आह भगवान् वासुदेवः अशोच्यान इत्यादि ।
"भगवद्गीता शाङ्करभाष्यसमेता", मोतीलाल बनारसीदास, दिल्ली, १९८१ (पृ. ९).

(4) कर्मण्येवाधिकारस्ते मा फलेषु कदाचन ।
मा कर्मफलहेतुर्भूः मा ते सङ्गोऽस्त्वकर्मणि ।। भगवद्गीता - २.४७

(5) न हि कश्चित्क्षणमपि जातु तिष्ठत्यकर्मकृत् ।
कार्यत ह्यवशः कर्म सर्वः प्रकृतिजैर्गुणैः ।। भगवद्गीता - ३.५

(6) नैव किञ्चित्करोमीति युक्तो मन्येत तत्त्ववित् ।
पश्यञ्शृण्वन्स्पृशञ्जिघ्रन्नश्नन्गच्छन्स्वपन्श्वसन् ।।
विलपन्विसृजन् गृह्णन्नुन्मिषन्निमिषन्नपि ।। भगवद्गीता- ५.८, ९ अ.

(7) प्रकृतेः क्रियमाणानि गुणैः कर्माणि सर्वशः ।
अहंकारविमूढाः कर्ताहमिति मन्यते ।। भगवद्गीता - ३.२७

(8) जन्मबन्धविनिर्मुक्ताः पदं गच्छन्त्यनामयम् । भगवद्गीता - २.५१

(9) अनपेक्षः शुचिर्दक्षः उदासीनो गतव्यथः । भगवद्गीता - १२.१६ अ

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The Karmayoga of the Bhagavadgītā

Hukam Chand Patyal

1.0. An attempt is made in this paper to discuss the *Karmayoga* as revealed in the *Bhagavadgītā* (BG). The doctrine of transmigration and rebirth depends upon the *Karman* of the previous birth of a human being.

1.1. It is in the fitness of things that this seminar is being organised in the saged memory of Lokamanya Bal Gangadhar Tilak. This Savant enlightened the whole world with his remarkable work. *The Gītārahasya,* which was compiled in Mandalay Jail in Burma (now Maynmar). The first Marathi edition of this work appeared in June 1915 and since then so many reprints have appeared, but the first version of Hindi translation by Madhavrao Sapre appeared in 1917. This work has gained such a popularity that now we have Kannada, Telugu, Bangla, Tamil and English translations.

1.2. The BG is perhaps most widely read and beloved scripture in the entire religious literature. Its power of inspiring and counselling its readers has remained undiminished and qually relevent till today. The message of the teachings of the BG is equally important even for today's world and also for the entire mankind.

2.0. The whole process of transmigration and rebirth is called *saṅsāra,* and the beings entrapped in

it wander through restless and unending streams of periodical returns to life in one farm or another. This *saṅsāra* has no beginning and no end, but is a matter of perpetual enslavement. The belief is that any mishap is result on effect of *Karman* of one's deeds or acts of the previous birth.

2.1. The term iṣṭāpūrta (RV 10.14.8) 'The fulfilment of that which is desired' refers to a kind of package, that holds all of one's deeds and that precedes a person's entry into the world, where it establishes a place for him. According to the Brāhmaṇic motion a person is born into a world which he has earned for himself through his action (Kauṣī. Br. 26.3). For the Mīmāṁsakas the *Karman* did not involve divine will; it was part of an impersonal metaphysical system of cause and effect wherein act brought an automatic response. The Upaniṣads talk of *Pitṛyāṇa* (Praśna U. 1-9) and Devayāna (Muṇḍaka U.3.1.6), the latter does not lead to the rebirth on this earth. A man becomes good by his actions (Tai U. 2.8; Bṛ. Āra U. 4.3.33). Truly, one becomes good through good action, and bad by bad (action) (Bṛ. Ār) U. 3.2.13)[1]. The *sukṛta* refers to good merits, that generate stay in the heaven (cf Jai. U. Br. 3.14.6). The term *sukṛta* refers to (moral) merits required for attaining heaven' it does not have ritualistic tinge (Bodewitz 1993 : 74, Patyal 2002:80; 2005 : 184 f.). The Classical Yoga system talks of *Karmāśaya* the the accumulation or receptacle of *Karman*'. This *Karmāśaya* is a kind of seed which can either mature in one's present life or, if not fully ripened, in another lifetime (adṛṣṭajanman).

That seed consists of *saṅskāra* 'one's personal disposition', *Vāsanā* 'conscious level of one's mind', *Kleśas* 'afflictions'. The five hindrances are afflictions are : *avidyā* 'undifferentiated consciousness', *asmitā* 'the feeling of personality (i.e. ego)', *rāga* 'passion', *dveṣa* 'aversion', and '*abhiniveśa* the will to live'.[2]

2.2. The doctrine of Karmans (acts) gradually sprang from the Vedic naturalism, mysticism, and piety. For the origin and development of the concepts of *Karman* and rebirth (see O' Flahrty (ed.) 1983).

2.3. The BG lays special emphasis on the significance of the *Karman,* that is why its philosophy is known as *Karmayoga.* The *yoga* of BG demands that actions should be performed without attachment to their results or fruits, for otherwise, with attachment, comes enslavement, not freedom. Actions must be performed as sacrifice *(Yajña),* which means that they must be performed in a spirit of reverence, with utmost attention to the divine. The Central theme of BG is the *Karmayoga,* the pursuit of action without attachment to the fruits of one's acts.

2.4. When one renounces the attachment one has for fruits of one, actions (BG. 4. 19-23; 12-6-7), and sees one's actions as God's actions and the fruits as the God's will, one gets liberated from the traps of *Karman* (BG 3. 31d *mucyante te'pi karmabhiḥ*). This text advocates that one should perform one's obligatory (*niyata*) duties in accord with one's status in society (*svadharma*), these acts be performed without any desire for their results (BG 18. 23; 2.31). One's own obligatory duty is preferable to the duty of

someone else which is dangerous (BG 3.35; cf. 18.45-48)[3]. Man attains perfection by worshipping by his own duty. Him from whom all things proceed and by whom all this is pervaded (BG18.46). Actions must be performed with a single minded devotion to the divine. "Those who renounce all actions in Me and are intent on Me," Kṛṣṇa reveals, "Who worship Me with complete discipline and meditate on Me, whose thoughts are fixed on Me these I quickly lift up from the ocean of death and rebirth" (BG. 12.6-7)[4]. One should devote all actions while concentrating on the Lord. By dedicating on the Lord one attains eternal and imperishable rest. (BG 18.56-57). The wise who have (appropriate) devotion cast off the fruit of action; they are released from the bondage of (repeated) births, and go to that place where there is no suffering (BG 2.51). Human actions consist of five factors of components, viz. *adhiṣṭhāna* (body) *kartā* (agent), *karaṇa* (instrument), ceṣṭas (various activities), and *daiva* (divinity or destiny itself). Whatever action a man does by his body, speech and mind, right or the apposite, these are its causes (Manu Smṛ. 12.3; 12.5-9; Yājña. Smṛ. 3.134-136).

3.0. The main emphasis in the BG is on the *Karmayoga*. In BG (5.2)[5] it is clearly stated that *karmasaṁnyāsa* and *karmayoga* both lead to happiness, yet between *saṁnyāsa* (renunciation) and *karmayoga* (pursuit of action), the latter is superior to the former. The *yogins* give up attachment and perform actions for attaining purity of the self. They perform actions by means of the body, the mind, the

intellect, or even by means of the sense alone (BG 5.11). One who is possessed of devotion, abondoning the fruit of actions, attains the highest tranquility (BG 5.12 ab).[6] In BG (2.47) it is emphatically said 'Your right is in action alone, but not in its furits. Let not the fruit of action be your motive (to action). Let not your attachment be (fixed) in inaction.[7]

3.1. In BG in a number of places the concept of *Yoga* is defined. (Kṛṣṇa says) having recourse to devotion, O Arjuna, perform actions casting off (all) attachment. Being equable in success and failure; such equability is called *yoga* (i.e. karmayoga, BG 2.48)[8]. It is further elaborated *yogaḥ karmasu kauśalam* (BG 2.50 d). 'This disposition (*yoga*) means skill in (performing) actions.' One who performs action without attachment (for the fruit), he attains the Supreme (BG 2.19).

3.2. The rebirth takes place 'by way of a necessary supplement to the result of actions', or 'in order to bring the result of actions to completion.' Manu Smṛ. (12.89-90) talks of two types of acts, viz. *pravṛttaṁ karma* (act which fulfils wishes in this world or in the next), and *nivṛttaṁ karma* (act performed without any desire (for its fruits), and for the aquisition of true knowledge); the latter type is equated by the tradition with *mokṣa*.

Since man lives under the control of *karman,* he aught to be always alert to way of maintaining his equilibrium and of avoiding evil consequences (Mahā Bhā. 3. 207. 19-20; of 12.23.19 ff.). According to the

Purāṇic tradition *karman* and fate (*vidhi, niyati or daivam*) are at times equated and at times entrasted. One type of destiny is brought about by fate or divinity (*daiva*), whereas the other by men. One's own *karman* is called fate,..., therefore wise men say that manly effort (*Puruśārtha*) is more important. All ill fate can be overcome by effort... Through effort men obtain the fruit they seek; men who have no manly energy depend on fate. Fate, what a man does, and the effects of the past, present and future; This triad beats fruit for a man (Matsya P. 221.1-12).

4.0. In the context of the concept of *karmavāda* it can be easily maintained that this doctrine is equally relevant even for the modern age. BG speaks of the *Karmayoga,* which pleads that acts should be performed with a single minded devotion and without caring for its fruit. Modern man is more interested in the fruits of his acts. He is full of vices, hatred, lust, anger, ill-feeling towards others. BG (6.47) talks of devotion towards the divine. 'Even among all devotees'. he who, being full of faith, worships me, with his inmost self intent on me, is esteemed by me to be most accomplished among devotee's.[9]

4.1. The BG is a perennial source of spiritual knowledge for all ages. The BG changes with each reader and devotee, fluctuates in meaning with each successive generation of interpreters, it lives for ever. The vitality constitutes its sacrality.

5.0. From the foregoing discussion we are led to the following considerations *argumentic causes :*

(i) In the entire ancient Indian tradition the concept

of *Karman* and rebirth plays a very vital role.

(ii) The Karmayoga is to be carried out without any desire for the fruit. This yoga activates the entire humanity.

(iii) The philosophy of BG is the teaching of the *Karmayoga,* the pursuit of action, without attachment to the fruits of one's acts. the pursuit of action is better than the renunciation of action.

(iv) The *Karmayoga* doctrine of BG is very much relevant to the modern age, and it shall be followed with utmost sincerity.

NOTES

1. Bṛ. Āra. U. 3.2.13 *puṇyo vai puṇyena karmaṇā bhavati pāpaḥ papeneti/*
2. Yog. Sū. 2.3 *avidyāsmitārāgadveṣābhiniveśāḥ kleśāḥ/*
3. BG 3.35 *śreyān svadharmo viguṇaḥ paradharmāt svanuṣṭhitāt / svadharme nidhanam śreyaḥ paradharmo bhayāvahaḥ //*
4. BG 12.6-7 *ye tu sarvavṇi karmāṇi mayi saṁnyasya matparāḥ / ananyenaiva yogena māṁ dhyāyanta upāsate // teṣām ahaṁ samuddhartā, mṛtyusaṅsārasāgarāt/ bhavāmi na cirāt Pārtha mayyāveśitacetasām //*
5. BG 5.2 *saṁnyāsaḥ karmayogaś ca niśśreyaśakarāv ubhau / tayos tu karmasaṁnyāsāt karmayogo viśiṣyate //*
6. BG 5.12 *ab yuktaḥ karmaphalaṁ tyaktvā śāntim āpnoti //*
7. BG 2.47 *karmaṇy evādhikāras te mā phaleṣu kadācana / mā karmaphalahetur bhūr ma te saṇgo'stv akarmaṇi //*
8. BG 2.48 *yogasthaḥ kuru karmāṇi saṅgham tyaktvā Dhanañjaya / siddhy asiddhyoḥ samo bhūtvā samatvaṁ*

yoga ucyate //

9. BG. 6.47 yoginām api sarveṣām madgatenān tarātnmanā / śraddhāvān bhajate yo māṁ sa me yuktatamo mataḥ //

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Section 4

Writings of Lokamanya Tilak in the field of Sanskrit and Indological Studies

Journalistic Mirror of Lokamanya, the Scholar

Shreenand L. Bapat

The Lokamanya remained a scholar at the heart, and always maintained that it was just आपद्धर्म that he had to lead the path of politics. He devoted, next to his political activities, most of his time to scholarly activities. Scholars are jealous of the work he produced while in jail! The 'गीतारहस्य', 'The Orion', 'The Arctic Home in the Vedas' and the 'Vedic Chronology and Other Essays' are considered to be the major contributions of the Lokamanya to Indology. His scholarship, however, can also be gleaned from his Forewords and Introductions to various books, and from numerous articles published in the Kesari, the Mahratta and other journals. They exhibit the expanse of Indology as visualised by him. They should not merely be taken as "journalistic". These articles exhibit that he was not only a lover of tradition but also a radical and rational reformer. Two hundred of such writings of the Lokamanya, have been collected in the fifth volume of the समग्र लोकमान्य टिळक [1] as follows:

Subject matter	Articles	Pages
Social Reforms	41	3 -199
Reforms in Women	16	203-270
Dharma	12	273-325
Problem of Religious Minorities	33	329-494

Political Philosophy	4	497-520
Social and Cultural Philosophy	12	523-573
Issues in Linguistics	11	577-624
Literary Criticism	31	627-785
Researches in History	6	789-819
Discussion on शास्त्र	8	822-852
Personal Sketches and Obituaries	26	855-965

On the basis of this volume, I wish to review some of his less known writings on धर्मशास्त्र Hinduism and history.

(1) On the Celebration of puberty of a woman:[2] Celebration on occurance of the first menses of a girl was prevalent in the Indian society from ancient times. Since child-marriage prevailed during the medieval period, this custom was retained for removal of the trauma from the mind of the girl. During the colonial period, however, it had turned extremely filthy and fictitious. On occurance of the first menses, the गर्भाधान ritual used to be performed and the girl used to be taken around in procession. Considerable rise in the age of marriage during this period, however, made this ritual redundant. Moreover, it would bring a great discomfort and embarrassment to the adolescent girl. The Lokamanya calls all this meaningless and harmful and reminds that it was not the धर्मसूत्रकार आश्वलायन, but his commentator who had prescribed for the गर्भाधान ritual. He further argues the ritual brought disgrace to the 'real' Dharma and that the 'lost Veda-s' must not be quoted for evidence. He also refutes the 'aid' brought to the subtle occasion by the parrot-like

chanting of mantra-s by a 'priestly porter'. He argues that this moment of attaining puberty should be taken as a natural process. It would be right to read his opinion in his own words. 'He says: स्त्री-पुरुषांच्या प्रथम संयोगाच्या वेळी भटजीबावांची साक्ष कशाला पाहिजे, आणि त्यांचा भत्ता आपण कशासाठी भरावा याचा कोणीच विचार करीत नाही ही मोठ्या दुःखाची गोष्ट होय. भारवाहकाप्रमाणे गीर्वाणवाणीग्रथित बीभत्स मंत्रांचे ओझे वाहणाऱ्या भिक्षूंच्या पोपटी मंत्रोच्चाराने किंवा निंद्य नर्मसचिव्याने अप्राप्ततारुण्यदश युव-युवतींच्या अपक्व रतिसुखाला काय मदत होणार आहे? भटजीबुवांनी आपल्याबरोबर अग्निनारायणाचीही थोडीबहुत सोय केली आहे. अशा विषयसुखाच्या बाबतीत होम करणे, देवतांचे आव्हान करणे, नाकांत भलत्यासलत्या झाडांचा रस ओतणे, आणि या सर्वांना धर्माज्ञा म्हणणे, म्हणजे धर्माची आणि त्याच्याबरोबर ईश्वराची थट्टा करणे होय. सृष्टीतील प्राणिमात्रांच्या शरीरप्रकृतीचे जे धर्म आहेत. त्यांतलाच हा एक होय... यासाठी या संस्काराच्या संबंधाने चालू असलेले धर्माचे खूळ अगोदर नाहीसे झाले पाहिजे. [3]

(2) On the issue of Adoption:[4] Adoption of a boy had become a major mode for saving one's property during the British Raj. This, however, would lead to controversies and complications. Even Tilak had to face the Tai Maharaj controversy which costed him heavily in physical, mental and financial terms! He had written vigorously on the issue much before he underwent the trouble. He had refuted the custom of adoption for the sake of inheritance, saying that the adopted son could never substitute the 'born' one, and that having progenee was not at all a requisite for continuity of lineage (नामसंकीर्तन). While dividing the property, he states, only subsistence should be offered to the adopted son, and not a share of the property.

(3) Defining Hinduism : Tilak spoke on the 4th of September 1890 at the Ray Market (Now Mahatma

Phuley Mandai), Pune, on the definition of Hinduism. In his speech he defined Hinduism as follows:

प्रामाण्यबुद्धिर्वेदेषु साधनानामनेकता ।
उपास्यानामनियमश्चैतद् धर्मस्य लक्षणम् ॥

[The Hindu Dharma stands for bearing faith in the Veda-s, pursuing various means (of getting to the Divine) and having no constraints regarding the Venerable]

Replying to the critique on the matter produced by one Gangadhar Raghunath Purandare, the Lokamanya specified that any definition should apply to all Hindus and should not apply to any non-Hindus.[5] One does not find any further discussion on the matter, perhaps due to great preoccupations of the Lokamanya for the next fifteen years. He further opened the issue in January 1915 in the चित्रमय जगत्.[6] Taking review of the definitions and contentions of the predecessors and contemporaries, he specified the need for a more comprehensive definition of Hinduism. (1) He argued that the deductive and negative definitions of Hinduism did not explain its nature. (2) Further, that the derivation of the word 'Hindu' from 'Sindhu' was rather defining oneself in the words of the others. The fact remains that all inhabitants of India were not Hindus and all Hindus did not reside in India. (3) Moreover, the term Hindu was coined by the invaders as a derogatory name, just like the word 'Natives' used by the Britishers for Indians. (4) The Lokamanya maintained that only study of Hinduism did not make anyone Hindu. (5) It was usually argued that performance of the rituals

prescribed by the श्रुति-s, the स्मृति-s and the पुराण-s would make a person Hindu. The Lokamanya points out that this could add further complications to the problem, since those rituals had moved out of vogue and did not apply to all in the कलि Age. (6) Moreover, the rituals differed from region to region and time to time. (7) The Lokamanya disagrees with the contention that those who called themselves Hindus should be accepted as Hindus. He maintains that anyone was free to call himself anything. (8) According to him, identification of a Hindu on the criteria of such acceptance by the Court of Law was like "yoking the pony behind the chariot". (One can see that problems 1, 7 and 8 mentioned above are prevalent even today, decades after enforcement of the Hindu Law.)

After this discussion the Lokamanya puts forth his new definition of Hinduism in three verses as follows:

प्रामाण्यबुद्धिर्वेदेषु साधनानामनेकता ।
उपास्यानामनियमश्चैतद् धर्मस्य लक्षणम् ॥१॥
धर्ममेनं समालम्ब्य विधिभिः संस्कृतस्तु यः ।
श्रुतिस्मृतिपुराणोक्तैः क्रमप्राप्तैरथापि वा ॥२॥
स्वे स्वे कर्मण्यभिरतः श्रद्धाभक्तिसमन्वितः ।
शास्त्रोक्ताचारशीलश्च स वै हिन्दुः सनातनः ॥३॥

[The Hindu Dharma stands for bearing faith in the Veda-s, pursuing various means (of getting to the Divine), having no constraints regarding the Venerable. A person, who is initiated with rites prescribed by the Veda-s, the स्मृति-s, the पुराण-s, and the tradition; who performs his prescribed duty, bears faith and devotion, and acts as per the शास्त्र-s, should be termed as a सनातन Hindu.]

The present author would like to compare Tilak's

definition with the one given by Svatantryaveer V. D. Savarkar, a great patriot, revolutionary and reformer of his time. Savarkar had defined a Hindu as follows:

आसिन्धुसिन्धुपर्यन्ता यस्य भारतभूमिका ।
पितृभूः पुण्यभूश्चैव स वै हिन्दुरिति स्मृतः ॥

[One who accepts India, which extends from (the western) sea to (the eastern) sea, as his sacred fatherland, should be termed as a Hindu or from the Indus to the Indian Ocean.]

One can easily see that this 'nationalist' definition by Savarkar is not as apt as that of Tilak's, since it does not speak of any initiation, rituals and does not address the various issues raised by Tilak, especially those mentioned in points 2 to 6 and 8 above.

The definition derivated by the Lokamanya should also be subjected to reconsideration, for : (1) it does not leave any room for the non-सनातन Hindu; (2) it does not accept the non-believers like चार्वाक-s, बौद्ध-s, जैन-s and सिख्ख-s who are inseparable from the Hindus for all practical purposes. Moreover, such a definition is likely to broaden the rifts that are being deliberately notched in the society in the name of caste and religion.

(4) On the issue of 'reforms' in instruction of the देवनागरी alphabet:[7] The Department of Public Instruction of the then Bombay Presidency had resolved to arrange for teaching the traditional देवनागरी alphabet in a different manner. The alphabet, thus, would no longer be taught as per the traditional मातृका configuration, or that of the माहेश्वरसूत्र-s. The new instruction was to occur as per the 'ascending

complexity of the form of the letters'. (This mode of teaching alphabet in the order of 'ग - म- भ - न... र - स - त - ळ...' etc. prevailed for some time during the British Raj and further continued till the time when the present author was a primary student (1979-1983). One can find the same in the alphabetical charts (अंकलिपी-s) of that period.) Naming this new order as 'Murder of the Alphabet' the Lokamanya criticises the Department and its advisors subscribing to simplification for the undue conceit ('ग'ची बाधा) they put on in this matter.[8] He further calls for the consultation of the Indologists in Germany, France and America and a movement by people in opposition of the order.

(5) On the date of the शिवदिग्विजय बखर : [9] The शिवदिग्विजय बखर was published at Vadodara in 1895 in the पुरातनेतिहास प्रकाशक मंडळींची ग्रंथमाला as its publication No. 1. One copy of the बखर was dated बहुधान्य संवत्सर, शक 1640 (1718 AD). The Lokamanya pointed out that बहुधान्य, the name of the संवत्सर, however, did not correspond with शक 1640. On the other hand, it corresponded with शक 1740, i.e. 1818 AD. This date sustained through the support of the internal evidence as well. Several 'lovers of history' had criticised this scientific and unassuming conclusion of Tilak. Commenting on their critique, he wrote on the 24th of March 1896: श्रीशिवत्रधपतींबद्दल आम्हांस कितीही अभिमान असला तरी नवा लेख जुना आहेसे भासविण्याचा आम्ही प्रयत्न करू इच्छीत नाही. खरोखरच कोणाजवळ जुने लेख असल्यास ते मोठ्या आनंदाने जुने आहेत असे कबूल करू; पण श्रीशिवछत्रपतींच्या नांवावर जुने आणि नवे एकाच मापाने

लेखण्याची किंवा जुन्याचे नवे, अथवा नव्याचे जुने करण्याची आमची इच्छा नाही.[10]

[Though we are proud of Chhatrapati Shivaji, we do not wish to present any new document as old. If somone possesses old documents, we would happily accept the old documents as old, but we do not wish to hold both the new and the old documents at par; and we do not agree to accept the new documents as old in his name.]

There is hardly any need to comment on the Lokamanya's objective view of history appearing in this article.

(6) On the जेधे शकावली : [11] The शकावली was brought to the notice of the Lokamanya by its owner Dayajirao Sarjerao Jedhe of Kari, Tal. Bhor, Dist. Pune, sometime in 1906-07. Tilak had shortly to face the famous trial of sedition and had to remained confined at the jail of Mandalay up to 1914. He could not, thus, find time to look at the शकावली. On finding some leisure, he took a brief review of the शकावली in the Quarterly of the Bharat Itihas Samshodhak Mandal, Pune in 1916.

(7) On Shivaji and Brahmins:[12] The Lokamanya, in his article on this issue, refuted the views of one "Historicus" expressed in the Times of India some time in August 1899. Historicus had opined that it was Brahmins who were responsible for the fall of the Maratha Empire. Tilak argued that the Peshwas received their authority from Chhatrapati Shahu. They did not snatch it from anyone. Secondly, Peshwa Bajirao (I) alone was responsible for the rise of the

new Sardars like Shinde, Holkar and Gaikwad. He did not discriminate in the name of caste. The Peshwas protected the throne of Satara. On the eve of the downfall of the Maratha Empire, the Peshwa (Bajirao II) was rather weak, while the Sardars were relatively stronger. The responsibility of the downfall of the empire, thus, cannot solely be placed on the shoulders of the Peshwas. He further warned that even the assumption that such responsibility went to the Peshwas should not prevent the Brahmins of 1899 AD from celebrating Shivajayanti.[13]

I have attempted to bring to the notice of scholars only a few of the writings of the Lokamanya. His views, supported by apt evidence gathered from books and journals, are not merely 'bookish'. They are the result of his incessant labour, objective thinking and vast experience of the human behaviour. The span of his scholarship is visible from the various academic issues he dealt with, amidst so many other competitive preoccupations. He, in fact, has done much more than what many of the full-time scholars of the present-day do. Pursuit of स्वाध्याय alone shall be fitting tribute to the Lokamanya.

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[2] Op. cit., pp. 19 to 38; 4 *Editorials; Kesari,* January 23; February 6, 13, 20, 1883.

[3] Op. cit., p. 21.

[4] Op. cit., pp. 39 to 65; 7 *Editorials; Kesari,* November 13, 20, 27, December 11, 25, 1883; January 22, March 11, 1884.

[5] Op. cit., pp. 276-277; *Miscellanea; Kesari,* October 02, 1900.

[6] Op. cit., pp. 278 to 290.

[7] Op. cit., pp. 596 to 600; Editorial; Kesari, October 04, 1904.

[8] Op. cit., p. 598.

[9] Op. cit., pp. 789 to 793; Miscellanea; Kesari, March 23, 1896.

[10] Op. cit., p. 791.

[11] Op. cit., pp. 811 to 813.

[12] Op. cit., pp. 794 to 801; Editorial; Kesari, August 22, 1899.

[13] Op. cit., pp. 796.

लोकमान्य- तिलकमहोदयानां योगदानम् ।

गुलाम दस्तगीर अ. बिराजदार

"जन्मसिद्धोऽधिकारो मे स्वराज्यं" निजगाद यः ।

राष्ट्रसेवाऽर्पितस्वानां 'तिलकः' तिलकायते"[१] ॥

'ऋक्सूक्त-वैजयन्ती' इत्येतस्मिन् ग्रन्थे प्रक्कथनं विलसति, एतत्प्राक्कथनं च एनं ग्रन्थं पुनरपि अधिकं विलासयति । अत्र हिन्दीभाषायां लिखितं विद्यते- "वैदिक संशोधन मण्डल के उदारमना, चारित्र्यंसपन्न, वयोवृद्ध और वेदप्रेमी आश्रयदाता के उदार अनुदान के बलपर प्रस्तुत "ऋक्सूक्त वैजयन्ती" को अनुवाद एवं टिप्पणियों के साथ प्रस्तुत करते हुए हमें बडा हर्ष हो रहा है । प्रस्तुत ग्रन्थ के आश्रयदाता श्रीमान् श्रीकीर्तिनारायण सिंहजी बिहार के निवासी एवं क्षात्रकुलविभूषित सज्जन हैं । आप के रामवंशी पूर्वजों ने बरसों पहले अवध छोडकर बिहार को अपनी आवासभूमि बनाया था । श्रीमान् श्रीकीर्तिनारायण सिंहजी ने राष्ट्रीयत्व की प्रेरणा लोकमान्य बाल गंगाधर तिलक से ग्रहण की; एक दो बार उन्हें लोकमान्य तिलक के दर्शन का भी सुअवसर प्राप्त हुआ था । तिलकजी के 'गीतारहस्य' से अतीव प्रभावित होकर आपने कर्मयोगी जैसा जीवन व्यतीत करने की ठान ली"[२] ।

एतस्मिन्नेव ग्रन्थे "उदाराशय श्रीमान् श्रीकीर्तिनारायण सिंह"[३] इति शीर्षकेण हिन्दी भाषायामेव सविस्तरं लिखितं वर्तते । परंतु अत्र एतस्मिन् लेखे केवलं श्रीमतां श्रीकीर्तिनारायणमहोदयानां लोकमान्य तिलकमहोदयैः सह समागत-संपर्क-संबंध-धारणादि समाश्रित्य विशेष-प्रसंगांशरूपेण समुल्लेखनं मया क्रियते यथावद् हिन्दीभाषायामेव- "सन १८९३-९४ में ही आप बाल गंगाधर तिलक की विचारधारा की ओर आकृष्ट हो चुके थे। लोकमान्य तिलक की मूर्ति आपके मानस मंदिर में कब की आसीन हो चुकी थी । उनका अनूदित गीतारहस्य तो आपका पथप्रदर्शक बना था । उनके दर्शन के पाने के लिये आप उत्सुक हो उठे थे । अन्तमें कलकत्ता में उनके दर्शनका सुअवसर पाकर आप फूले न समाए । आज भी उनकी याद आते ही आपकी आँखे आसुओं से छलछलाती हैं और आपके मुख से अनायास शब्द निकलते हैं', "तिलक भगवान की निर्भीकता के संबंध में मेरी पूरी श्रद्धा हुई थी ।"

लोकमान्य तिलक के प्रति अपार निष्ठा रखेनेवाले श्रीमान् श्रीकीर्तिनारायण सिंहजी का उन्ही की स्मृति के रूप में (अर्थात् टिळक-महाराष्ट्र-विद्यापीठ रूप में) संचलित प्रस्तुत संस्था के संपर्क में आना वास्तव में "व्यतिषजति पदार्थानान्तरः कोऽपि हेतुः"[४] का बडा ही अच्छा उदाहरण है । नही तो कहाँ बिहार और कहाँ पूना?"... इत्यादि । एवं भारतीय विद्यायाः अभ्यासार्थं यथार्थ-प्रेरकाः लोकमान्य तिलकाः ।

पुनरपि अत्र अन्यसन्दर्भानुसारं लोकमान्य-तिलक-महोदयनां विषये बहुविधाः विचाराः प्रकटिताः सन्ति । एतेषामपि आधारः लोकमान्यानां योगदानविषये भवितुमर्हति । एतेषां महोदयानां भारतीयः अभ्यासः सर्वक्षेत्रीयः अस्ति इति कस्यापि अभ्यासकस्य ध्याने अवतरति एव । तथापि अत्र एतस्मिन् लेखे केषाञ्चन क्षेत्राणां नामोल्लेखः भवति तद् यथा धार्मिक - अध्यात्मिक - सामाजिक - शैक्षणिक - सांस्कृतिक - राष्ट्रिय- राजकीय - नैतिकादीनि क्षेत्राणि । एतद्विषये यथा एतेषां लोकमान्य-तिलक-महोदयानां योगदानं जातं वर्तते तथा नैव कस्यापि अन्यस्य इति कथयितुं शक्यते ।

[५]'अभिनवज्योतिर्धराः' इत्येतद् आधुनिकं संस्कृत-पुस्तकम् । एतस्य संस्कृत-पुस्तकस्य लेखकः गुर्जरभाषिकः स्व. पं. भाईशङ्कर पुरोहितमहाभागः । एतस्मिन् पुस्तके बहूनां नेतृत्वगुणसंपन्नानां नर-नारीरत्नानां चरित्राणि सङ्गृह्य, सङ्ग्रन्थ्य, सन्निबध्य च प्रकाशितानि सन्ति । एतेषु नररत्नेषु लोकमान्य-तिलक-महोदयानां चरित्रस्य समावेशः संजातः विद्यते[५]। अत्र यथायोग्यस्थानेषु संस्कृत-सुभाषितरत्नानामपि उपयोगः कृतो वर्तते अनेन लेखकेन । एतस्य मम लेखस्य प्रारंभे "जन्मसिद्धोऽधिकारो मे स्वराज्यं..." इत्ययं श्लोकः अनेनैव लेखकेन रचितः अस्ति । एतस्मिन् चरित्रात्मकलेखे लोकमान्य- तिलकमहोदयानां गुणवैशिष्ट्यानां समुल्लेखः जातो वर्तते । तथा एतानि गुणवैशिष्ट्यानि - " [६] अमन्दोत्साहः, निःस्वार्था राष्ट्रसमाजसेवोत्कण्ठा, विद्यावैचक्षण्यम्, अविलासि सरलं स्वच्छं च शीलम्, अध्यापनपटुता, भारतीयभाषाणां विकासार्थं निष्ठा, तासाम् अभिव्यक्तिसामर्थ्यस्य च संवर्धने, प्रकाशने च समादरः, भारतीयसंस्कारेषु अध्यात्मदृष्टौ च गौरवम्, तत्प्रकाशनाय च द्रढीयसी उत्कण्ठा, आत्मसार्थ्यविश्वासश्चेत्येते एवासन्" विशेषाः गुणाः लोकमान्य-तिलक-महोदयानाम् । एतादृशाः एते सर्वे गुणाः एतैः हृदये कथने, वाचने च नैव स्थापिताः किन्तु समाचरणे कृतिशीलतया सुफलतया चापि अवतारिताः वर्धमानगत्या । अतः एव भारतीयलोकेषु स्वराष्ट्रियशिक्षणदाननीतिविषये गौरवबुद्धिधारणासहितं यथार्थं जागरणं समुत्पन्नम् अभवत् ।

एतस्मिन् चरित्रात्मकलेखे बाल्यकाले एव लोकमान्यतिलकैः रचितः एकः संस्कृत श्लोकः प्रकाशितः अस्ति - "सदागुणज्ञं सुपरीक्षणाय यं कवीन्द्रकाव्यामृतकाञ्चनस्य वै । करोति लोके निकषं नु दुर्जनं, खलाय तस्माय हिताय मे नमः[७] ॥" एतादृशाः संस्कृतश्लोकाः बाल्यकालतः एव एतेषां संस्कृतरुचिं निर्दिशन्ति ।

न्या. रानडे महाशयप्रभृतयः 'समाजे प्रविष्टानि दूषणानि पूर्वं निरसनीयानि, येन स्वस्थः समाजः राजकीयस्थितिमपि साधु घटयेद्' इति अमन्यन्त । तदर्थं ते शासनद्वारा समाज- शोधोपयुक्तान् नियमान् घटयितुम् उत्साहिनः आसन् । लो. तिलकमहोदयेभ्यः तु नैतदरोचत । एते हि अमन्यन्त - 'समाजशोधः नु अस्माकम् आन्तरिकी समस्या । तदर्थं शिक्षणादिभिः जन्मनः परिष्करणीयम्, येन ते स्वयमेव

स्वस्थां हितकारिणीं च समाजस्थितिं संपादयेयुः ।... इत्यादि ।" तथैवैतैः समाजसुधारणा समारब्धा ।

राष्ट्रियशाला-महाशालयोः, मराठा-केसरी-वृत्तपत्रयोश्च सन्चालनमधिकृत्य विवादः प्रावर्तत तच्चालकेषु । एतेषु चालकेषु तिलकमहोदयाः अपि आसन् । अत्र कलहबीजं सञ्चालकानां वेतनग्रहणं कार्यान्तरप्रवृत्तिश्चासीत् । तिलकमहोदयाः अभणन्- 'जीविकापर्याप्तमेव वेतनमस्माभिः ग्राह्यम् । न चैतस्मिन् भिन्नकर्मणि स्वात्मा नियोजनीयः ।" बहूनां मतं तथा नासीत् । संस्थायाः हानिर्माऽस्तु इति विभाव्य तिलकमहोदयाः उद्देशत्यागादात्मत्यागमेव वरमिति मेनिरे । एतादृशी एतेषां कार्यकरणप्रवृत्तिः।

हिन्दु-मुस्लिमकलहविषये तिलकाः बहुंशः उपदिदिशुः "उभयत्र-धर्मावलंबिभिः परस्परं प्रद्वेषं विहाय सौहार्देन वर्तितव्यं, कुटिलमनसः शासनस्य च प्रतिकारपरायणैः भाव्यम्" इति ।

लोकमान्य-तिलकमहोदयानां राष्ट्रिय-महासभायाम् अर्थात् नॅशनल काँग्रेसपक्षे प्रवेशः अभवत् । एषा महासभा वस्तुतः राष्ट्रियचेतनायाः प्रतिनिधिः भवतु इति व्याख्यानैः, लेखादीनां माध्यमेन चैतैः बहुवारं निवेदितम् । हिन्दुधर्मं विनिन्द्य तद्गां लोकास्थां शिथिलयितुं प्रवृत्तैः सुधारकब्रुवैःसह अपि वाग्युद्धमप्यक्रियत प्रज्ञाधनिभिः लो. तिलकमहोदयैः । नवशिक्षणादीक्षादिभिः भारतीय-आत्मा साकल्येन जागरितः भवेदिति आसीत् लोकमान्यांनां विचारपूतं मतम् । पूर्वं परंपरानुसारं लघुरूपेण गृहगतरीत्या प्रवर्तमानं गणेशोत्सवं प्रति व्यापकतां समानीतवन्तः लोकमान्य-तिलक-महोदयाः । तथैते च राष्ट्रिय-स्वातन्त्र्यस्य विग्रहरूपिणां छत्रपति-शिवाजी-महाराजानां जन्मजयन्त्युत्सवं महतोत्साहेन प्रायोजयन् । अनेन सर्वजन-संग्रहणं दिनानुदिनं वर्धमानगतिकमेवाभवत् । ततः सर्वजन-जागृतिकरणमपि सुलभं सफलं च जातम् । विशेषतया सामान्यजन-जागृतिः बह्वधिकतया संग्रहणं भूत्वा "लोकमान्य" 'नेतृत्वपदं स्वयमेव समागतं तिलकमहोदयान् प्रति' तथा च "निरक्षराग्रणीः तथा 'तेल्यातांबोळ्यांचे पुढारी' (इतिभाषायाम्) तिलकमहोदयाः इत्यपि उपाधिं प्राप्तवन्तः, कदाचिदत्र उपरोधः अपि स्यात् । तथापि अत्र उपरोधो भवतीति अमत्वा एतैः महोदयैः जनजागरणकार्यं नैव त्यक्तम् ।

'महाराष्ट्र टाईत्स' इति मराठी भाषिकम् । एतदस्ति वार्तापत्रमेव । अत्र अधुना सप्ताहस्य प्रथम-पञ्च-दिनेषु प्रतिदिनमेकः लेखः 'सगुण-निर्गुण' इति शीर्षकेण प्रकाशितः भवति । एनं शीर्षकं समाश्रित्य एकैक-साधु-सत्पुरुष-नाम्ना भक्तिमार्गविषये सर्वजन-प्रबोधनात्मकाः विचाराः प्रकटिताः भवन्ति । तथैतद्वर्षस्य जुलैमासस्य षड्विंशतितमे (२६ जुलै २००५) दिनाङ्के श्रीसमर्थ-रामदास-स्वामिवर्यान् समाश्रित्य लिखितः अस्ति लेखकोत्तमेन श्री साळगावकर जयन्तमहोदयेन[८] । २३ जुलै २००६ तमे दिनाङ्के लोकमान्य-तिलकमहोदयानां सार्धैकशततमः जन्म-जयन्तीमहोत्सवः संपत्स्यते इति संस्मरणं दत्त्वा श्रीसमर्थ-रामदास-स्वामिवर्य लोकमान्य-बालगङ्गाधर-तिलकमहोदययोः साम्यदर्शकाः विचाराः निवृत्ताः सन्ति इति । तद् यथा श्रीसमर्थ-रामदास-स्वामिवर्यैः रघुपतिरामम्

आराध्यदैवतं मत्वा, जनजागरणं च कृत्वा राष्ट्रभक्तानां निर्माणं कृतं तथा लोकमान्य तिलकवर्यैः गणपतिम् आराध्य, दैवतं मत्वा, जनजागरणं च कृत्वा राष्ट्रभक्तानां निर्माणं कृतम् । कैश्चिदितिहासकारैः श्रीसमर्थ-रामदास-स्वामिवर्याः राष्ट्रगुरुपदेन समलङ्कृताः, तथा लोकमान्य-तिलक-महोदयाः अपि राष्ट्रगुरुपदार्थं योग्याः एव इति अस्मत्सदृशैः बहुभिः अपि मन्यते प्रतिपाद्यते च । एतेषां लोकमान्यानां कुशाग्रबुद्धिवैभवस्य विलक्षणता निर्विशेषतया अनुभूता आंग्ल-बुद्धिवादिभिः बहुवारम् । एतेषामयं कुतूहलपूर्वकः कौतुकविषयः अपि । अतः एते आंग्लबुद्धिवादिनः लोकमान्यानां मरणान्ते एतेषां मस्तिष्कं (मेंदू) क्रेतुमिच्छन्ति स्म इत्यपि बहुभिः कथ्यते ।

लोकमान्य-तिलकमहोदयानां दिवं गमनान्ते (०१ ऑगस्ट १९२०) बहुभिः मान्यवरैः अपि उक्तम् । परन्तु अत्र विस्तारभयेन द्वयोः एव महामान्यवरयोः उक्तिः दीयते । योगिप्रवरः महर्षिः श्रीअरविन्दः अभाषत[९]- "लोकमान्यः खलु स्वपौरुषेण उत्तमपुरुषेषु स्थानम् अवाप्तवान् । सः खलु भारतीयेषु स्वातन्त्र्यस्य भावनां नवीनाम् ओजस्विनीं च चेतनामधुक्षयत् । सः एव नः स्वातन्त्र्यस्य अग्रदूतः" इति । महात्मा-गान्धीमहोदयः अभणत्- "नूनं मम आश्रयस्तंभः पतितः । लोकमान्यो हि भारतीयजनतायाः दैवतमभवत् । राष्ट्रसेवैव तस्य धर्मः । भारतीयं स्वातन्त्र्यं हि जीवनसर्वस्वम् इति अभ्युपगम्य सः सर्वान् क्षणान् अखिलान् च रक्तबिन्दून् भारतस्य स्वातन्त्र्ये यज्ञे अजुहोत् । नरशार्दूलः अयं सदैव स्वातन्त्र्यमारटन् स्वसुखं, स्वजनान्, शरीरस्वास्थ्यं च विस्मृत्य सर्वात्मना भारतजननीमसेवत । अजातशत्रुः पुरुषर्षभः अयं किल पुण्यश्लोक-अभिनव-भारतस्य पितेति दृढं प्रत्येमि"[१०] इति ।

भारतीयस्वातंन्त्र्ययुद्धस्य धुरिणाः योद्धारःबहवः । तथा एतेषां सर्वेषां सर्वासां च प्रसिद्धिः अपि । तथापि 'लोकमान्य' इति उपाधिं प्राप्तवन्तः बाल-गङ्गाधर-तिलकमहोदयाः एव । एतादृशं लोकमान्य-तिलककृत-हिन्दुधर्मलक्षणं समुल्लिख्य विरम्यते अतिविस्तरात्...

"प्रामाण्यबुद्धिर्वेदेषु साधनानामनेकता ।
उपास्यानामनियमो ह्येतद् हिन्दुत्वलक्षणम् ॥"

टिप्पण्यः सन्दर्भसहिताः

१. *'अभिनव ज्योतिर्धराः'* - लेखक : पं. भाईशङ्कर पुरोहित प्रकाशनं, 'भारतीय विद्या भवनं, मुंबई' १९८६, पृ. ३५ ।
२. *"ऋक्सूक्तवैजयन्ती'*- संपादकः प्रा. ह. दा. वेलणकरः, तिलक महाराष्ट्र शाखाभूत वैदिक संशोधन मण्डल, पुणे १९६५, पृ. ४-५ ।
३. तत्रैव पृ. ६-७ ।
४. व्यतिषजति पदार्थानान्तरः कोऽपि हेतुः, न खलु बहिरुपाधीन् प्रीतयः संश्रयन्ते । विकसति हि पतङ्गस्योदये पुण्डरीकं, द्रवति च हिमरश्मावुद्गते चन्द्रकांतः ॥ 'उत्तररामचरितम्' महाकविः भवभूतिः षष्ठे अङ्के द्वादशक्रमाङ्के उपलभ्यते ।

५. 'अभिनवज्योतिर्धराः', टिप्पणी-१.
६. तत्रैव पृ. ४० ।
७. तत्रैव पृ. ३८ ।
८. 'महाराष्ट्र टाईम्स', २६ जुलै २००५, श्री जयन्त साळगावकर ।
९. श्री अरविन्द महर्षि उक्तिः बहुत्र प्रकाशितः अस्ति ।
१०. महात्मा गान्धी-उक्तिः -,,- -,,-

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Section 5

Lokamanya Tilak on the Study of Sanskrit and Indian Languages

Tilak on Some Vedic Words of Non-Aryan Origin

Abhijit Ghosh

Abstract

The paper purports to evaluate B. G. Tilak's theory of explaining, with the help of culues found in the Chaldean or Accadian literature, a few Vedic nomenclatures, presumbably loanwords, mostly from the Atharva-veda (Śaunaka 5.13, Paippalāda 8.2): *ā́ligī-.viligī́, urugū́lā-, tābúva-, kimī́din-, taimātá-,* and attempts to point out that the learned scholar was too bold in his propositions.

Abbreviations

AV = Atharva-veda, ep.= epic, KśkS = Kauśika-sūtra, Kāvy =Kāvya literature, lex = lexicon, lexical, med.= medical literature, MhBh=Mahābhārata, PSK = Kashmirian Paippalāda-saṃhitā, PSO = Orissan Paippalāda-saṃhitā, RV=Ṛg-veda (Kh = Khila), ŚS= Śaunaka-saṃhitā, Suparaṇ = Suparṇādhyāya, Suśr= Suśruta.

Introduction

1.1 Apart from his versatile role as an educationist, a journalist, a teacher versed in law, an orator, a politician, a patriot, a revolutionary, a social worker and a philanthropist, Lokamanya Bal Gangadhar Tilak is also recognized as a profound Sanskrit scholar, mostly for his The Orion, The Arctic Home in the Vedas and the Gītā-rahasya. His keen

interest even in the then rather uncultivated domain of foreign influence on some Vedic terminologies, is evident from a bold essay that the contributed to the Sir R. G. Bhandarkar Volume, as early s in 1917. This was itemized by Regamey: 452, in his Analytical Bibliography of the Works on non-Aryan Elements on the Civilization and the Languages of India. Tilak's attempt was appreciated by another stalwart from Maharashtra, viz. R. N. Dandekar, in his work on Indo-Mediterranean contacts, passim.

1.2 This paper seeks to examine Tilak's explanations of few such terms-presumably loans from non-Aryan sources–, mostly from the Atharva-veda Śaunaka-saṃhitā 5.13 : Paippalāda-saṃhitā 8.2) : *ā́ligī-.viligī, urugū́lā-, tābúva-, kimīdin-,* and *taimātá-,* The Orientalist extraordinary ventured to do so with the help of the Chaldean or Accadian literature of a people of the Turanian race, as embodied in the cuneiform inscriptions excavated in Mesopotamia, discovered and deciphered by the European scholars in the latter half of the 19th century.

ā́ligī-

2.1 The hapax legomena *ā́ligī-.viligī-,* occur in a mantra against snake-bite, at ŚS 5.13.7 :

ā́ligī- ca viligī, ca / pitā́ ca mātā́ ca |
vidmá vaḥ sarváto bándhv /
árasāḥ kīm kariṣyatha ||

'Āligī as well as Viligī / Father as also mother-|
(We) know you connection fully;/ Bereft of force, what will (you) do?||'

2.2 Both the words refer presumably to 'species of unidentified snakes', so Griffith: 1.27 fn., Böthlingk & Roth: 1.703, 6.1168. Their forms and close association apparently suggest that they are connected but thir etymologies and analyses are uncertain. The Pada-pāṭha analyzes: *ā́-ligī-, vi-ligī-,* Whitney: 243 conjectures that the wholly obscure words might also be nominative masculine of stems in *-in,* but their accent is against it. The widely varying theories of Debrunner: 403, Agrawala 1951: 2 and R. N. Dandekar (personal communication 18.9.1971) fail to convince (see Ghosh 2000: 104, 2002: 124).

2.3 Tilak: 33-36, 38-39 tried, as mentioned at 1.2, to discover Chaldean influence on some names in the hymn and explained, at pp. 33-35, *ā́ligī-* as an Accadian word. In the absence of anything seemingly like a cognate of *ā́ligi-* in Chaldean or Accadian literature, this is too bold, but the learned Lokamanya's credit lies in the fact that he could speculate that "[T]here **are...** words in the Atharva Veda, especially in he **poison** and witch-craft hymns, which on their face appear to be foreign importations" (p. 35, stress my own).

2.4 Now, the elements *ă̄l-, ă̄r-, ul-, ur-, kă̄l-, kar-, kul-, kur-, gal-, gar-, gol-, hă̄l-, śar-,* etc. are found in numerous Old Indo-Aryan words associated with the meaning 'poison': *ala-gardá*-m. 'water-serpent', Suparṇ+ (synonym: *kālaka-,* lex.) alasa-m. 'certain small poisonous animal', Suśr, *āluka*-m. 'Śeṣa' lex., ***hālāhala***-m. 'certain poisonous plant', med., *hālāhala*-m.n. 'sort of deadly poison', Kāvy (with which

Böthtlingk & Roth: 2.159 and Kuiper 1955: 167 compared *kalākula*-n. (kind of) poison', lex.), *karkōṭaka*-m. 'a Nāga', ṚV (Kh)+, *karkoṭa*-n. 'certain poisonous fruit', Suśr, *karkaṭi*-f. 'certain snake', lex., *śarkoṭa*-m. 'species of venomous snake or scorpion', AV, etc. (see also sub 3.2, 4.3, 4.4). In 2002: 125, I diffidently ascribed these elements to the Austro-Asiatic source. Though their Austro-Asiatic provenance is unsure, there is little doubt that the element *āl*- is contained in *ā̀ligī-,* as will be mainifest also from the treatment of *viligī*-, next.

viligī-

3.1 For Tilak: 33-35, *viligī*- is the Accadian name of an Asura of Assyrian mythology, occurring in Sumerian languages, thought *ā́ligī*- is wanting there, while Scheftelowitz 1925: 250 proposed an isolated, far-fetched Indo-European etymology. This word cannot, however, evidently be separated from the preceding *ā́ligī-,* but it is difficult to analyze it in conformity with the latter. The Orissan Paippalāda reading *āliki-,* and especially the Kashmirian Paippalāda *ālakā*-, for *ā́ligī-,* would very much seem to point to the right direction, but they are not helpful in the case of *viligī*-. PSO 8.2.6 has *vilī*- for *viligī-,* and the corresponding Kashmirian line (8.2.6) is very corrupt in this regard:

ālakā ca vya ca lu / ptvā yas te mātā ca |
vidmȧ te vidvato baddhato vandhus /
sarasaḥ kiṃ kariṣyasi ||

3.2 Significantly, the expression ālakaṃ vyālakaṃ is found in another Paippalāda hymn, PSO 9.10, with a reference to 'poison' in the same varse, no. 10 (at

Bhattacharya: 596):

ālakaṃ vyālakaṃ / vyāvaṃ jālma jigīmahe |
jaradviṣaṃ yuvābhiṣak / vayam it sāsahāmahai ||

And, this indicates that *ā́ligī-* and *viligī-* should not be analyzed as *ā́-ligī-, v-iligī-, but as ā́l-ig-ī-* (probably for * *ā́ilikī-*, f. of * *ā́lika-*, cf. *ā́lika,* PSK 8.2.6), *vil-ig-ī- =* * *vyā̀likī.* f of **vy-ā̀lika-)* with element *āl-* at their base, for which cf. *ā́la-*n. 'spawn', found as early as in *ā́lāktā (iṣuḥ)* 'poisoned (arrow)' at verse 15 of the appended, rather late, hymn ṚV 6.75 and see now Griffiths: 357 on *ā́lāka,* PSO 7.10.10a, with references Notably, PSO 9.10 is also a hymn against (snake-)poison, and has many other phrases in common with ŚS 5.13, like the reference to *taimāta-,* 3c (ŚS 6a); *śakuntikā me abravīd viṣapuṣpaṃ dhyantikā,* 8ab (cf ŚS *karṇā́ śvāvit tàd abravīt girer avacarantikā́,* 9ab); *arasaṃ viṣam, passim* (ŚS *arasaṃ viṣam,* passim, *arasàtamaṃ viṣam,* 9d), etc. The initial cluster vy- of the proposed **vy-ā̀iligī-, *vy-ā̀ilikī-* can be attested even in the corrupt Kashmirian line *ālakā ca vya ca lu ptvā yas te mātā ca,* perhaps somewhat for *ā́lakā ca *vyāla[kā]* (cf. *ālakam vyālakām*, PSO 9.10.10) *ca *pitā yas te mātā ca.* We may now compare *vy-ā́la-* adj. 'bestrewed with poison on both/all sides' (following Lüders 1916: 318-321), ŚS 5.22.6, perhaps *vyāla-* m. (f. *vyālī)* 'snake', ep.+, *vyālaka-* m. 'serpent', MhBh. For the change of Śaunakāya to Paippalāda *k, cf, urugū́la- : udakūlā-*(4.4).

urugū́lā-,

δ4.1 This hapax legomenon occurs in the next verse, ŚS 5.13.8:

urugū́lāyā duhitā́ | *jātā́ dāsy àsiknyā* [*ḥ*] |

pratáṅkaṃ dadrúṣīṇāṃ |
sárvāsām arasáṃ viṣām ||

'Urugū́lā's daughter,/(Female) savage born of the dark (female)-/Of the aggressively piercing (female [snakes]),/ The venom (be) inefficacious- of all||'

At b, *ásiknyā* (instr.) must be emended to *ásiknyāḥ* (abl.); this now has the support of the uniform reading of the corresponding mantra (8.2.7) in all the PSO manuscripts (Bhattacharya: 529). Though a through study is needed to arrive at a definite conclusion in this regard, it may a priori be assumed that in the Orissan Paippalāda tradition, the *ḥ* before a *p-* was perhaps pronounced more as a visarjanīya than as an upadhmānīya, thereby retaining its original character and surviving in orthography, whereas in the Śaunakīya school it was uttered more like an *ḫ*. Since in the medial position of a pāda, the initial *p* of a consonant cluster undergoes doubling after a vowel according to Sanskrit phonetics and metrics, the preceding *ḥ*. which can hardly be distinguised from the *p,* tends to be eliminated. Another similar, now hotly debated, example is found at PSO 7.10.8, where for ŚS 19.39.8 *yátra nā́va prabhráṃśanaṃ* | *yátra himávataḥ sirah* | (ab), the iniform reading of the Orissan Paippalāda manuscripts is *yátra nā́vaḥ prabhráṃśanaṃ* | *yátra himávataḥ siraḥ* (ab), thereby apparently suggesting that the line contains the earliest, though faint, reference to the deluge legend in Sanskrit literature (more at Ghosh, forthcoming). In the present instance *(ásiknyā[ḥ] pratáṅkam)*, this tendency is attested even across the boundary of a

pāda, in this case a hemistich.

As for *pratáṅkam dadrúṣīṇām* at c, the alternative possibility of rendering by 'swiftly fleeing' deos not appeal to me. In its only other occurrence, at ŚS 4.16.2b (*yónilā́yam cárati yáḥ pratáṅkam*) *pratáṅkam*), as rightly surmised by Whitney: 177, seems to be attested in the meaning 'inśolently', as against *nilā́yam* ;secretly; stealthily'. In fact, rendering inefficacious the venom of the **fleeing** snakes (*√drā-, dru-* 'to run hither and thither')- in contradistinction with the defiantly **biting** ones (*√dṛ-* to split open; tear asunder; divide by digging') - appears pointless. This may answer Lanman's query, at Whitney: 243, why the latter, at both places, first wrote 'rapidly' (presumably assuming first a connection of *dadrúṣīṇām* with √drā- 'to run'), and then interlined 'defiantly' (relating the word with √dṛ- 'to pierce').

4.2 The meaning of the word and the snake indicated being unknown, Whitney: 243 renders *urugū́lā-* by 'broad-knobbed one', with a query, but only "since something had to be done to make the line translatable". He conjectued a relationship of *-gūla-* to *guḍa-, gola-;* this was rightly doubted by Mayrhofer 1992: 228. Tilak: 33-35 associated the snake-name with the Accadian word *Urugala or Urugula,* litterally, 'the great city', used to denote the nether world, the abode of the dead in the Chaldean and Babylonian cosmology, and this, too, appeared very doubtful to the same scholar (1956: 109), as also the other widely divergent suggestions proposed, eg., by Agrawala 1951: 2 (Mayrhofer 1992: 228), Kuiper

1959: 211 (o.c.:225, 228).

4.3 This is nevertheless a possible loanword, as suspected long back in 1898 by Richter: 199, with no connection of the first element wit *urú-* 'wide' *úras-* 'breast' or *urága-* 'snake'. In 200: 98, I hesitantly tried to connect the word witha group of Austro-Asiatic snake-names, but this has already been withdrawn by me at 2002: 127. Rather, since, as pointed out above (2.4), the meaning 'poison(ous)' is associated also with a few words beginning with *ur-, ul-*, which may be to *kur-, kul-* what *al-, ar-* are to *kal-, kar-,* we may compare, on one hand, OIA words like *úluka*-m. 'certain Nāga', Suparṇ, *uluta-* m. 'Boa constrictor', lex, etc., and on the other *kulika-* m. 'kind of poison', ib., also 'one of the eight chiefs of the serpent race', ep.+, *kulūta-* m.pl. 'certain people', Kāvy+, whose association with serpents was dealt with by Rönnow 1936: 150-151, *kulaka-* m. 'species of a green snake', 'certain plant' whose synonym is *viṣa-puṣpa*(*ka*)-, lex., *kulaṭī-* f. 'red arsenic', ib. and lastly but very importantly, *kū́lbaja-* at ŚS 12.5.12, 53, which is unclear and unanalyzed, but the element *kūl-* whereof probably belongs to this group of 'poison'- words– cf. the preceding *aghá-viṣā-* 'fatally venomous' at verse 12.

4.4 More significantly, as also indicated at 2.4, these 'poison(ous)' -elements are often reduplicated -- we may note, besides *ala-gardá-, kalākula-, halāhala-* etc. cited there, also *urúkāla*(*ka*)-m. 'certain creeper with poisonous red fruits', lex., *halāgolaka-* m. 'species of insect'., MhBh, with which Böhtlingk &

Roth: 7.1567 compared *galagolin-* m. [or *galagolī-* f] 'species of snake'. Suśr. Now, *urugū́lā-* may better be explained from an original **urú-kūl-ā-*, with reduplication, for which we may compare *kurukullā-* f. 'certain Buddhist Tantric deity', whose intimate association with snakes has been treated by me in detail at Ghosh 2002: 128-129. Interesting in this connection is the second segment of the Kashmirian Paippalāda reading *udakūla*• (8.2.7) for Śaunaka *urugū́lā-*, for Śaunakīya : Paippalāda *k*, cf *ā́ligi-.viligī, ālakā-lālakā-, vyālaka-* cited before (3.2) From but this ur-form might have evolved on the one hand ŚS *urugū́lā,* and on the other PSK *udakūlā-*.

tābúva-,

5.1 Of the many words "founded upon the bed-rock of folk-lore"– in the expression of Bloomfield 1897: 425, 1899: 61– in ŚS 5.13, of special interest is this one, *tābúva-,* (n.), occurring only in stanza 10:

tābúvaṃ ná tābúvaṃ | *ná ghet tvám asi tābúvaṃ* |
tābúvenārasáṃ viṣáṃ ||

Tābuva not tābuva,/ Surely you are not tābuva.|
By tābuva the venom is powerless ||

5.2 This is one of the most controversial words in the entire Atharva-veda, owing to its doubtful meaning and as a result its unknown etymology at the same time (Mayrhofer 1956: 494, 1992: 642). The syntax of the formula is understood in a way (*tābúvaṃ ná* [*vā*] *tābúvaṃ ná ghet tvám asi tābúvaṃ...*) that does not apparently make much sense, especially because of the following *tābúvenārasáṃ visáṃ,* which also rules out the

possibility that the serpent has been addressed to by these words. Orissan Paippalāda also reports *tābuva-* *(8.2.9,* where Kashmirian *tāvuca-* must be corrupt.)

5.3 Context shows that some medicinal herb or other against snake-poison must have been meant (Bloomfield 1897: 706), unsurely Böhtlingk & Roth: 3.298, Monier-Williams: 442c). This is, according to Griffith: 209 fn., a supposed antidote that renders snakes' poison ineffectual, probably an amulet rather than a medicinal herb. Karambelkar 1961: 46 also thins it to be an antidote, but they were absolutely unaware of its etymology in this sense.

5.4 More than a century ago Weber 1896: 681-685 (= 1896a: 363-366), 1896b: 873-875 inaugurated a novel line of investigation. He elaborately discussed this verse and the following one and speculated, ingeniously and boldly enough, a relation between *tābúva-* and Australo-Polynesian (Tongan) *tābu* 'taboo', while also recognizing the attendant difficulties. He, however, thought of a late borrowing, coming from India by way of the Indian colonies of Indonesia. This seems improbable. A word, long lost in Sanskrit and in India, cannot ordinarily find its way so late in a far-off region. Barth 1899: 85 and Lévi 1923: 56-57 (=124-125 a Bagchi 1929), while postulating an Austro-Asiatic influence on Vedic religion and civilization, reasonably hinted that Atharvan *tābúva-* might really have been derived from *tabu* of the Australo-Polynesians, whence English *taboo, tabu,* German *Tabu,* Duch *taboe,* etc. This was the veiw held later by Tilak: 35 fn. 2, and by Chatterji 1945: 206.

The hypothesis to identify *tābuva-* with *aboo* etc. has, however, a serious draw-back. 'Taboo' is an object **avoided** as sacrosanct, while the Atharvan mantra doubtless implies the **use** of the object denoted by *tābuva-*. So, nothing warrants the conclusion that the word for 'taboo' is really contained in this tri-syllabic word of unknown origin. The widely diverging suggestions of Uhlenbeck: 111b (Dravidian) and Agrawala 1951: 1, 3 (Semitic complex) are also hardly acceptable (see Ghosh 2000: 60 with references).

5.5 Now, with *tābuvaṃ* etc., according to KśkS 29.13 the patient is given water to sip, probably for a sort of ritual purification, from a gourd. Dārila explains: "*tābuvaṃ*" *ity anayā alābuny* (loc. sg. of *alābu-* **n**, meaning the vessel made of the **fruit**) *udakaṃ kṛtvā ...ācamayati viṣaruptam*. This is definitely a valuable suggestion, since the association o the bottle-gourd with serpents is attested throughout in Indian beliefs, down tothe present day. Only one example may suffice here. Bṛhac-chārṅgadhara-paddhati 355.2 (at Prabhuṇe: 411) categorically states, sub the topic sarpa-sāmānya-cikitsā:

alābu-vījaṃ trapusasya vījaṃ |
tasyaiva toyena ca tan niṣiktam |
ālepanādyair vidhivat prayuktaṃ |
hanyād viṣaṃ *takṣaka-sambhavaṃ ca ||*

In addition to the textual evidence given at Ghosh 2004: 221 for the association of bottle-gourd with serpents, it may be noted that this fruit often finds

mention, as antidote for snake-bite, in modern folk literatures of the Indian sub-continent, e.g. in Bangladeshi snake-charms. See in this context, for example, Āh'mad 1995: 196 (mantra 364), 202 (mantra 380), with references.

5.6 Most interesting, however, is the fact that the connection of the gourd with serpents is attested in the Atharva-veda itself, as ŚS 8.10.29-33 (PS 16.135.8-12), which speaks of Virāj's ascent to the snakes that used the gourd as vessel while milking poison from her:

sód akrāmat, sā́ sarpā́n ā́gacchat, tā́ṃ sarpā́ upāhvayanta "viṣavaty éhī́" ti. tásyās takṣako vaiśāleyo vatsá ā́sīd, alābupātráṃ pā́tram. tā́ṃ dhṛtárāṣṭra airāvato' dhok, tā́m viṣam evā́dhok, tád viṣáṃ sarpā́ úpajīvanty, upajīvanīyo, bhavati yá eváṃ veda (29)

tád yásmā eváṃ viduṣe 'lā́bunābhiṣiñcet, pratyā́hanyāt (30)

ná ca pratyāhanyā́n, "mánasā tvā pratyā́hanmī́" ti pratyā́hanyāt (31)

yát pratyāhánti, viṣáṃ evá tát pratyāhánti (32) viṣáṃ evā̀syā́priyaṃ bhrā́tṛvyam anuviṣicyate, yá eváṃ veda (33)

'She (=the Virāj metre) moved upward; she came to the serpents; the serpents welcomed her: "Venomous female, approach!" Viśāla's descendent Takṣaka was her yearling, the gourd-bowl the bowl. Irāvant's descendent Dhṛtarāṣṭra milked her, (he) milked but venom from her, the serpents are sustained by that venom, (one) who

discerns so comes to be sustained (29).

Ergo, for whomsoever thus discerning (one, i.e. the priest) should pour out with a gourd, (he, i.e. the patient) must refuse [it, i.e. the gourd] (30). If (he) does not refuse, (he) must refuse [it] by [reflecting]: "With the thought (I) refuse you" (31) In that (he) refuses [the gourd], (he) so refuses but the venom (32).

Venom is but poured out after the unkind aversary of his that discerns so (33)'

5.7 That in view of the Kausika rite prescribed at 29.13, "this looks as though there ws some connection **in the mind of the Sūtrakāra** between tābuva and alābu" (stress my own), had been guessed also by Bloomfield 1897: 428, who was followed by Bahulkar 1977: 412 ≅ 1994: 173. But, unsure, and quite in the dark regarding the etymology of the word, in his translation Bloomfield took *tābúva-* as qualifying the serpent and remarked that "at any rate tābúva, and tastúva in the next stanza, seem to be a cure for poison", dismissing the whole question by saying that "this and the next stanẓa are wholly problematic."

5.8 Elsewhere (at Ghosh 2000: 72-73, 2004: 222-224) I have tried to argue that this passage, in a different style and phraseology, refers to the identical ritual hinted at th formulaic *tābúva-* verse, and there should be little room for doubt regarding the meaning of the word, viz., 'bottle-gourd'. This is one of the surest loans from Austro-Asiatic, but comparable forms are found in the Austronesian branch of Austric, viz. Batak, Sampit *tabu* . Malagasy *tavu* 'id.'

Some of the Farther Indian cognates (with initial *l* for *t*) of these latter have long been recognized as the source of the OIA name for the same, AV+*alā́bu-* *(with Austric prefix [*k]a-), lexical *lābu-* etc. (Przyluski 1926: 31-33 = 155-157 at Bagchi, 19-20 at Sen, see also Kuiper 1948: 24, 127 fn. 175). The name of the gourd, of Eastern Asiatic origin, was adopted from the languages of those countries. The final *-va* of *tābúva-* is reminiscent of a final diphtohong or semi-vowel in some Austric cognates cited by Schmidt 1906: 104b = 1906a: 140=26 at Marouzeau 1908, its 104 (see also Berger 1959: 74), like Annamite *bā́u* (=**lbā́u̥*), Khmer *lbow, rabau,* Stieng *röbou; kröbou,* this last with prefix *k*[a]-, surviving in Indo-Aryan possibly only in *kalavū* 'gourd-vessel' in Prakrit. As no other IA cognate preserves the final dipthong or semi-vowel and the prefix *k*[*a*]- respectively, that exist(ed) in such forms in some (proto-)Austric languages, *tābúva-* and *kalavū-* must be very ancient loans. The journey of *tabu, tavu* 'bottle-gourd' from Sumatra to the far-off Madagascar may also re-enliven the question if in much more hoary past there existed a direct maritime link between Farther Asia and the south-eastern coast of India (as suggested by Hornell 1920: 211-216, 229-230, 232, 235), resulting in the adoption of *tābúva-* in the Atharva-veda.

kimīdin-

6.1 The Indo-Aryan religion being profoundly influenced by aboriginal beliefs in its lower strata, some Vedic names of enemies of man may derive from non-Aryan sources, Tilak's attempt (pp. 35-36) to explain ṚV+ *kimīdin- m,* 'certain malignant spirit' as

a combination of the Chaldean or Accadian names of the demons *Ekimmu* and *Dimme* of the Babylonian mythology is, however, fanciful, though the foreign character of the word is apparent, as suspected by Wackernagel; 143, from the initial *k-* before the palatal vowel *-i-,* and from its rather late occurrence, in maṇḍala 10 of the Ṛg-veda, and in the appended last hymn of maṇḍala 7, abounding in foreign words denoting names of spirits.

6.2 The most notable feature of the concerned spirits being their fondness for raw flesh and their intimate association with the carnivorous devils known as kravyād Piṣācas, elsewhere (at Ghosh 2000: 112-113, q.v. with reference) I ventured to translate the word as 'ghoul; carnivorous' and suggested a connection of the element *kimīd-* with a set of Austro-Asiatic words like Semang, Pangan *kĕmoyd,* Sakai *kĕ-moit* 'ghost'. Cham *kamoit,* Sue *kamut* 'devil'. Besisi *kĕmūt, kĕmuyt,* Kenaboi *kĕmit* 'grave', Khasi *kamet* 'corpse', etc. (Skeat & Blagden: 616b-617a, item G18). This was, however, diffidently done, and the IE etymology offered by a section of scholars and supported lastly by Werba 1992: 15. from *kṛmi-+√ad-+-in 'worm-eat-er'* (like *śva-ghn-in-*), may as well be nearer to the truth. For the other unlikely IE etymologies suggested for the word, see Mayrhofer 1956: 210, 1992: 351.

taimātá-

7.1 The masculine word *taimātá-* occurs only in the Atharva-veda (ŚS 5.13.6, 5.18.4, PS 8.2.4 and 1.44.1, 9.17.4, in addition 9.10.3, 9.17.5) and most probably means 'species of snake'. Connection with

timi- 'certain fabulous large fish' through a hypothetical *timāta-*, like *kairāta-* from **kiri-* through *kirāta-*, fails to convince on semasiological ground, as also derivation from *tema-* 'becoming wet', a word attested only in lexicons and formed from *timyati*, a late root, see Mayrhofer 1992: 669. Tilak: 34-35 attempted to connect it with the name of the primeval androgynous dragon, viz., *Tiamat*, generally represented as a female but sometimes even as a male monstrous snake in the Chaldean cosmogonic legends, whose struggle with Marduk, the Chaldean counterpart of Vedic Indra in Tilak's opinion, is the subject of some of the cuneiform tablets.

7.2 Since I do not have any suggestions to offer, let me summarily end the discussion on the word by saying that though a satisfactory etymology of the word has not yet been proposed, Tilak's venture appears too bold.

Epilogue

8.1 To sum up, Tilak 1917 tried to explain, with the help of clues found in the Chaldean or Accadian literature, some Vedic words, possibly loans from foreign sources, mostly from the Atharva-veda (Śaunaka 5.13 : Paippalaāda 8.2): *ā́ligi-.viligī́, urugū́lā-, tābúva-, kimīdin-, taimātá-*. He explained *ā́ligi-* as Akkadian, and *viligī-* as the name of an Asura of the Assyrian Mythology occurring in Sumerian languages, but the Paippalāda variants rather indicate an analysis as *ā́l-ig-ī-. vil-ig-ī*, (for **vy-ā́ligī-* cf. *ālakaṃ Vyālakam*, PSO 9.10.10), with *ā́l-* (cf. *ā́la-* 'spawn') at their base. Similarly, he associated the snake-name *urugū́lā-* with babylonian mythology, but since the elements *ā̆l-, ā̆r-, ul-, ur-, kā̆l-, kar-, kul-,*

kur-, gal-, gar-, gol-, hāl-, śar- etc. occur in many OIA words connected with the meaning 'poison' (often reduplicated), the word may better be explained from an original **uru-kúl-ā-* (with reduplication, for which of *kurukullā-* certain Buddhist deity associated with snakes', *Kalākula-* 'poison', *'urukāla-'* 'certain creeper with poisonous frutis') whence on the one hand Śaunaka *urugúlā-* and on the other Kashmirian Paippalāda *udakúlā-.*

Tilak accepted Weber's suggestion of a relation between the obscure *tābúva-* and Australo-Polynesian *tābu* 'taboo', but *tābúva-* is surely 'bottle-gourd', its comparable forms being found in Austronesian, some of the Farther Indian cognates (with initial *l-* for *t-)* of which have long been recognized as the source of the OIA name for 'id.', AV+ *alābu-,* lex. *lābu-* etc. His attempt to connect *kimīdin-* 'certain malignant spirit, especially ghoul' with Chaldean names of the demons *Ekimmu* and *Dimme* of the Babylonian mythology is fanciful, but its connection with a set of Austro-Asiatic words like Semang *kemoyd,* etc. for 'ghost; corpse; grave' as well as the IE etymology generally propsed, from *kṛmi- + √ad- + -in* 'work-eat-er' (like *śva-ghn-in-*), is also not very sure. Similarly, though a satisfactory etymology of *taimātá- has not yet been offered, Tilak's attempt to connect it with the name of the Chaldean* androgynous dragon *Tiama*t appears too bold.

6.2 To conclude, armed with the benefits of all the progress in Sanskritic researches made during the last 90 years after Tilak wrote on the topic, it is not very difficult for a modern scholar to differ from his conclusions. But, although in view of the discoveries

of new materials and the opening of new horizons in Indological studies since he advanced his theory in 1917, his etymologies may no longer be acceptable, it is amazing that this great man, first and foremost a politician and only then a scholar, also concentrated on such a then understudied topic as non-Aryan substartum in the Vedas and had the far sight in assuming foreign origins of the words concerned and an open mind to accept the Vedas to have borrowed from such sources, and almost a century ago at that!

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लोकमान्य टिळक आणि संस्कृत

गणेश उमाकांत थिटे

लोकमान्य टिळक हे राजकारणी आणि पत्रकार ह्या नात्याने खूपच प्रसिद्ध आहेत. संस्कृत व वेदविद्या ह्यांचा त्यांनी खूपच व्यासंग केला होता. त्यामुळे भारतीय संस्कृत पंडितांतही त्यांचे स्थान मानाचे आहे. प्रस्तुत लेखात त्यांचा संस्कृतसंबंधी दृष्टिकोण काय होता आणि त्यांचा संस्कृतव्यासंगाचा आणि पत्रकारितेचा कसा घनिष्ठ संबंध होता तसेच "प्रबंधलेखक" म्हणून त्यांची वैशिष्ट्ये कोणती ह्या मुद्द्यांचे सोदाहरण विवेचन करणे अभिप्रेत आहे.

विद्यार्थिदशेत असताना लोकमान्य टिळकांनी संस्कृतमध्ये काही काव्यरचना केल्या होत्या. त्यातील एक रचना दुर्जन ह्या विषयावरील "खलाय नमः" अशा शीर्षकाची होती. ह्या रचनेत दोन श्लोक असून त्यात संस्कृत सुभाषितांमध्ये परिचित असलेल्या पद्धतीनेच दुर्जननिन्दा केली आहे. ते श्लोक असे :-

सदा गुणज्ञः सुपरीक्षणाय यं (? यः ?)
   कवीन्द्रकाव्यामृतसेचनाय वै ।
करोति लोके निकषं न दुर्जनः
   खलाय तस्मायहिताय मे नमः ॥१॥
कृशानुतापः कुरुते यथामलं
   मलं गृहीत्वा वपनस्थजीवनम् ।
तथा करोत्येव च यः स नो हितः
   खलाय तस्मै प्रथमं नमोऽस्तु ते ॥२॥

ही रचना ओबडधोबडच आहे. "च वै" ह्यांच्या वापरावरूनही अक्षरपूर्ती करताना आलेल्या अडचणींची कल्पना येते.

एकदा प्रो. जिनसीवाले ह्यांनी वर्गातल्या विद्यार्थ्यांना संस्कृत कविता करण्यास सांगितले होते. त्यासाठी त्यांनी मातृविलाप हा विषय दिला होता. लो. टिळकांना म. शि. आपटे ह्यांसारखे संस्कृतज्ञ प्रतिस्पर्धी होते, तरी जिनसीवाल्यांनी टिळकांच्या कवितेला पसंती दिली. ह्या कवितेत आपला मुलगा मेल्यानंतर आईने केलेला शोक आला. कालिदासाच्या कुमारसंभवातील रतिविलाप आणि रघुवंशातील अजविलाप ही प्रसिद्ध विलापकाव्ये ज्या वृत्तात आहेत, त्याच "वियोगिनी" वृत्तात हेही श्लोक आहेत. त्यांपैकी पुढील श्लोक उदाहरणार्थ पहा-

   पितरौ प्रथमं ततः सुतौ हननस्य क्रम एष भो विधे ।
   तनयः प्रथमं कथं त्वया मम नीतः प्रतिकूलचारिणा ॥
   न भवान् भवनाद् बहिर्गतोऽनुमतिं प्राप्य कदापि नो मम ।
   अधुना परिहाय मां कथं सुत नापृच्छ्य दिवं प्रयास्यसि ॥
   तव दूयत एव कोमलें मृदुशय्याविनिवेशितं वपुः ।

प्रसहेत तदेव हा कथम् अधुना तात चिताधिरोहणम् ॥

ह्या श्लोकांवर कालिदासाची दाट छाया आहे.

पुढे मोठेपणीही लो. टिळकांनी संस्कृतमध्ये काही ना काही तर रचना करणे चालूच ठेवले होते असे दिसते. उदाहरणार्थ, काही वेळा ते आपल्या अग्रलेखांमधून काही स्वकृत श्लोक पेरतांना दिसतात. "हे आमचे गुरूच नव्हत" ह्या अग्रलेखात (*समग्र टिळक*, ३, पा. २३९) त्यांनी हिंदूंची दुर्दशा वर्णन करताना पुढील श्लोक रचून दिला आहे- "बाल्ये राजगुरुर्यन्ता यौवने भूतिदो नृपः। तथा पेन्शनदाता च न हिन्दुः प्रभुरात्मनः ॥" किंवा त्याच लेखातील (*तोच ग्रंथ*, पा. २४८) पुढील श्लोकात राष्ट्रघातकी गुरूंचे वर्णन केले आहे- "कामाल्लोभाद्भयाद्वापि मोहाद्वा भ्रष्टबुद्धितः। शिष्याय कुममतिं दद्यात्स गुरू राष्ट्रघातकः "॥

सुरत काँग्रेसमध्ये अध्यक्ष श्री. माळवी यांनी लो. टिळकांना बोलू दिले नाही. त्याला टिळकांनी जो विरोध केला त्याला अनुलक्षून नामदार गोखले ह्यांनी टिळकांवर असा आरोप केला की, टिळकांनी अध्यक्षांच्या अधिकाराचा उपमर्द केला. ह्याचा प्रतिवाद करणारा जो अग्रलेख लो. टिळकांनी लिहिला, त्यात त्यांनी पुढील श्लोक दिला आहे. तो जुन्या एका श्लोकातच थोडा बदल करून तयार झाला आहे- "अध्यक्षस्यावलिप्तस्य कार्याकार्यमजानतः। उत्पथप्रतिपन्नस्य कार्यं भवति शासनम्"॥ ह्या श्लोकातील "अध्यक्षस्थावलिप्तस्य" ह्या शब्दांच्या जागी मूळ श्लोकात "गुरोरप्यवलिप्तस्य" असे शब्द आहेत. (वरील श्लोक समग्र टिळक; ४, पा. २३९ वर आहे).

हिंदुधर्माचे स्वरूपलक्षण ह्या *चित्रमयजगत्* जानेवारी १९१५ मध्ये प्रसिद्ध झालेल्या लेखात लो. टिळकांनी हिंदू कोण हे सांगण्याच्या निमित्ताने स्वकृत असे श्लोक रचले आहेत आणि त्यांत हिंदूंची व्याख्या केली आहे. हिंदू कोण हा प्रश्न नेहमीच कठिण वाटतो. त्याचे उत्तर देण्याचा विविध प्रकारे अन्यत्र प्रयत्न झालेला दिसतो. टिळकांनी तो पुढीलप्रमाणे केला आहे-

प्रामाण्यबुद्धिर्वेदेषु साधनानामनेकता।
उपास्यानामनियमः चैतद्धर्मस्य लक्षणम्।
धर्ममेनं समालम्ब्य विधिभिः संस्कृतस्तु यः।
श्रुतिस्मृतिपुराणोक्तैः क्रमप्राप्तैरथापि वा।
स्व स्वे कर्मण्यभिरतः श्रद्धाभक्तिसमन्वितः।
शास्त्रोक्ताचारशीलश्च स वै हिन्दुः सनातनः ॥

ह्या श्लोकात सनातन हिंदू हा वेदप्रमाण्य मानणारा, कोणत्याही का होईना पण देवतेची उपासना करणारा, श्रुतिस्मृतिपुराणोक्त किंवा क्रमप्राप्त असे कर्म करणारा (म्हणजेच वर्णाश्रमधर्म पाळणारा?) असा जो, तो सनातन हिंदू होय, असे म्हटले आहे.

सांख्यकरिकेतील एका श्लोकाची कल्पनेने पुनर्रचना हीही लो. टिळकांची एक स्वतःचीच रचना मानावी लागेल. हा श्लोक त्यांनी "A missing verse in the Sāṅkhya kārikās" Sanskrit Research Vol. 1.2 (Oct.

1915) ह्या लेखात सुचविला आहे. सांख्यकारिकांमध्ये पुढीलप्रमाणे एका कारिका मुळात आहे- प्रकृतेः सुकुमारतरं न किंचिदस्तीति मे मतिर्भवति । या दृष्टास्मीति पुनर्न दर्शनमुपैति पुरुषस्य ॥ (६१) ह्या कारिकेत "सुकुमारतर" असा शब्द आहे. ह्या शब्दात "तर" हा प्रत्यय आहे. हा तुलनात्मक प्रत्यय वापरण्यासाठी आधी "सुकुमार" असे काही तरी सांगितले असले पाहिजे. असे सुकुमार असणारे दुसरे काही जगत्कारण आधी सांगितले असले पाहिजे व मग प्रकृति हे जगत्कारण "सुकुमारतर" आहे असे ह्या श्लोकात म्हटले गेले असले पाहिजे. मग जगत्कारण म्हणून दुसऱ्या कोणत्या गोष्टी असणे शक्य आहे. त्याची गौडपादभाष्याच्या आधारे (हा गौडपाद म्हणजे गौडपादकारिका म्हणून प्रसिद्ध असलेल्या कारिकांचा कर्ता नसून दुसराच कुणी असावा), लो. टिळकांनी कल्पना करून पुढील कारिका रचली आहे. कारणमीश्वरमेके पुरुषं कालं परे स्वभावं वा । प्रजाः कथं निर्गुणतो व्यक्तः कालः स्वभावश्च ॥ ह्या श्लोकात सृष्ट्युत्पत्तीची अन्य कारणे सांगितली असून प्रकृतेः सुकुमारतरं ह्या श्लोकात प्रकृति हेच खरे कारण असे म्हटले आहे. लो. टिळकांची सर्वात महत्त्वाची संस्कृतरचना म्हणजे "ब्रह्मसूत्रवृत्तिः" (पुणे, १९५७), मंडाले येथील कारागृहातच ह्या ग्रंथाची रचना झाली. ह्या ग्रंथामध्ये ब्रह्मसूत्रांवर लो. टिळकांनी स्वतः लिहिलेली संस्कृत टीका आहे. ह्या टीकेचे एक वैशिष्ट्य म्हणजे तिचा संक्षिप्तपणा. ही टीका मुख्यत्वेकरून स्मरणार्थ टिपण ह्या स्वरूपातील असून प्रत्येक सूत्राचा थोडक्यात भावार्थ चटकन् नजरेसमोर यावा ह्या उद्देशाने ह्या टीकेची रचना झालेली दिसते. मात्र केवळ स्मरणार्थ हा ह्या टीकेचा उद्देश नसून त्यात मधून मधून लो. टिळकांनी काही चिकित्सक विधानेही केली आहेत. शंकराचार्य किंवा रामानुज या जुन्या टीकाकरांच्या अर्थांचे परीक्षण लो. टिळकांनी केले आहे (उदा. पहा २.२.४३, ३.३.५४). त्याचप्रमाणे त्या त्या सूत्रात अभिप्रेत असलेली वैदिक किंवा स्मतिंग्रंथातील वाक्ये नोंदवून ठेवली आहेत. गीतारहस्य-लेखनाच्या अध्ययनाचा भाग म्हणून लो. टिळकांनी ब्रह्मसूत्रांवर वृत्ति लिहून ठेवली असावी. गीतारहस्याच्या सुरुवातीला "समर्पणम्" ह्या शीर्षकाखाली त्यांना काही संस्कृत श्लोक (त्यातील काही कालिदासाच्या रघुवंशातील प्रास्ताविक श्लोकांच्या अनुकरणाने) रचले आहेत. त्यात आपला ग्रंथ "श्रीशाय जनतात्मने" अर्पण केला आहे. ह्या सर्व लेखनावरून लो. टिळकांचा संस्कृतपंडित हा व्यक्तिमत्त्वविशेष स्पष्ट होतो.

लो. टिळक आपल्या अग्रलेखांमध्ये संस्कृतमधील प्रसिद्ध श्लोक, सुभाषिते ह्यांचा उद्धरणे म्हणून विपुल वापर करताना दिसतात. उदाहरणार्थ "ब्रिटिश सरकार आणि लोकशिक्षण" लेखात (*समग्र टिळक,* ३ पा. २०३) त्यांनी पुढील सुभाषित उद्घृत केले आहे- सद्विद्या यदि का चिन्ता वराकोदरपूरणे । शुकोऽप्यशनमाप्नोति हरे राम इति ब्रुवन् ॥ ह्या सुभाषिताचा अर्थ असा, की माणसाजवळ चांगली विद्या जर असेल तर पोट भरण्याची काळजी कशाला? "हरे राम" असे म्हणणारा पोपटही खाणे मिळवतो. "कृषिशिक्षण आणि धंदेशिक्षण" ह्या लेखात पुढील श्लोक उद्घृत केला आहे (*समग्र टिळक,* ३, पा. २२४)- चीयते बालिशस्यापि सत्क्षेत्रपतिता

कृषिः । न शालेः स्तम्बकरिता वप्तुर्गुणमपेक्षते ॥ ह्या श्लोकाचा भावार्थ असा, की शेत चांगले असले तर एखाद्या बालिशाची सुद्धा शेती चांगली होते. "लॉर्ड कर्झन यांची कारकीर्द" ह्या अग्रलेखाच्या सुरुवातीला (*समग्र टिळक,* ३, पा. ८८२) लोकांचा नाश करणारा हा धूमकेतूच होय असे सुचविण्यासाठी कालिदासाने तारकासुराच्या वर्णनाच्या वेळी वापरलेली कुमारसंभवातील ओळ लो. टिळकांनी उद्‌घृत केली आहे- उपप्लवे हि लोकानां धूमकेतुरिवोत्थितः ॥

विद्यार्थ्यांच्या शैक्षणिक जीवनात संस्कृतचे स्थान काय असावे ह्या संदर्भात लो. टिळकांचे विचार मननीय आहेत. लो. टिळक स्वभाषाभिमानी होते. देशी भाषांचा शिक्षणात योग्य तो समावेश असावा ह्या मताचे ते होते. तरी संस्कृत आणि इंग्रजी ह्या भाषांचे महत्त्व ते ओळखून होते. संस्कृत आणि इंग्रजी हटवून किंवा त्यांचे स्थान कमी करून प्रादेशिक भाषांचा प्रचार करावा ह्या मताचे ते नव्हते. तर ह्या भाषा तशाच अध्ययनासाठी ठेवून देशी भाषांचा विकास करावा ह्या मताचे ते होते. त्यांची "देशी भाषांस उत्तेजन देण्यासाठी काय केले पाहिजे" ह्या अग्रलेखातील (*केसरी* ६-३-१८९४) (*समग्र टिळक,* ३, पा. १३१) पुढील वाक्ये आज जवळ जवळ नव्वद वर्षांनंतरही उद्‌बोधकच आहेत- "इंग्रजी व संस्कृत या भाषांच्या ज्ञानाची यत्ता कमी न करता एकदोन विषय देशी भाषेतून शिकवण्याची जर कॉलेजातून सोय करता आली तर सदर भाषांस उत्तेजन देण्याच्या कामी युनिव्हर्सिटीने आपले कर्तव्य केले असे होईल अशी आमची समजूत आहे." त्याचप्रमाणे पुढील वाक्यही पहावे - "संस्कृतादि जुन्या भाषांचे ज्ञानही देशी भाषांच्या उत्कर्षास आवश्यक आहे असे थोड्या विचारांती कळून येईल" (पा. १२९). देशी भाषा आणि संस्कृत ह्यांची फारकत होता कामा नये असे त्यांचे मत होते. देशी भाषांची आणि त्यांच्या मातुःश्रीची फारकत करून देणे आम्हास सर्वांशी अहितकारक आहे (पा. १२९) असे त्यांनी म्हटले आहे. गेली काही वर्षे भारतातील हिंदी सोडून अन्य भाषांच्या प्रदेशांमध्ये संस्कृत भाषेच्या अध्ययनाचे स्थान कमी होऊ लागले दिसते. त्रिभाषासूत्रांत संस्कृतचा समावेश होणे कठिण होऊ लागलेले दिसते. काही वर्षांपूर्वी प्रादेशिक भाषांच्या जोडीने अनेकजण संस्कृतचा अभ्यास करीत असत. गेल्या काही वर्षांमध्ये मात्र प्रादेशिक भाषा आणि संस्कृत ह्यांच्यात फारकत पडत गेलेली दिसते. त्यामुळे संस्कृतच नव्हे तर इंग्लिश, फ्रेंच, इत्यादी भाषांचाही अभ्यास न करता केवळ एकाच प्रादेशिक भाषेचा अभ्यास करण्याची पद्धत रूढ झालेली दिसते. भाषाध्ययनाविषयीच्या भ्याड दृष्टिकोणातून ही प्रवृत्ती निर्माण झालेली दिसते. वस्तुतः भाषा, साहित्य इत्यादींच्या अध्ययनासाठी तौलनिक दृष्टिकोणाची अत्यंत गरज आहे. दुर्दैवाने हे घडत नाही. त्यामुळे आजही लो. टिळकांचे हे वर उल्लेखिलेले विचार स्वीकारण्याजोगे आहेत.

केवळ विद्यापीठीय पातळीवरच नव्हे तर आय.सी.एस. सारख्या प्रशासकीय आणि उच्च दर्जाच्या गुणवत्तेची अपेक्षा करणाऱ्या परीक्षेस सुद्धा संस्कृतचा अभ्यास आवश्यक आहे असे लो. टिळकांचे मत होते. पब्लिक् सर्व्हिस कमिशनच्या प्रश्नावलीला उत्तरे देताना लोकमान्य टिळकांनी हा मुद्दा मांडला आहे. त्यांच्या मते

संस्कृत आणि अरेबियन ह्या दोन्ही भाषांचा आय.सी.एस्.च्या अभ्यासक्रमात ग्रीक् व लॅटिन् एवढेच गुण ठेवून समावेश केला पाहिजे (समग्र टिळक, ७, पा. २५३). लो. टिळकांचे हे विचार जवळजवळ १०० वर्षांपूर्वी मांडलेले असले; तरती आजच्या बदललेल्या संदर्भातही त्यांची ग्राह्यता कमी झालेली नाही.

लो. टिळकांचे हे संस्कृतप्रेम केवळ बोलघेवडेपणाचे किंवा परोपदेशासाठी नव्हते. स्वतःच्या मुलाने संस्कृतचाच (दुसरा नव्हे) अभ्यास करावा असे आग्रहाने लो. टिळकांनी एका पत्रात म्हटले आहे. हे पत्र त्यांनी मंडालेहून दिनांक ८-३-१९१३ ला लिहिले आहे आणि न. चिं. केळकरांच्या टिळकचरित्रात हे उद्धृत केले आहे (समग्र केळकर वाङ्मय, खंड २, पा. ४१४ व पुढे). त्यात त्यांनी असे म्हटले आहे की, रामभाऊने (त्याच्या मुलाने) कॉलेजात संस्कृत विषयच घ्यावा. पालिभाषा घेऊ नये. पाली म्हणजे विकृत संस्कृत. ज्याला संस्कृत येते त्याला कोणाचे सहाय्य न घेताही काही थोड्या महिन्यांत पाली शिकता येते. शिवाय पुढील लेखनव्यवसायात संस्कृत उपयोगी पडेल, पाली नाही. या पत्रापूर्वी ३-९-१९१२ ला पाठविलेल्या एका पत्रातही त्यांनी पुढीलप्रमाणे लिहिले आहे. "मुलांना संस्कृत शिकवण्यास ओकशास्त्री ह्यांस ठेवले बरे झाले. त्यांना म्हणावे, नंदर्गीकरांसारखे घोटून घ्या" (समग्र केळकर, खंड २, पा. ४११). अशारितीने मुलांनी संस्कृत शिकावे, चांगले शिकावे ह्या विषयीचा त्यांचा आग्रह स्पष्ट होतो. त्या दृष्टीने वरील दोन पत्रे फारच बोलकी आहेत.

मात्र लो. टिळकांचे संस्कृतप्रेम अंध किंवा केवळ परंपरावादी नव्हते. पारंपारिक पद्धतीच्या संस्कृताध्ययनापेक्षा आधुनिक पद्धतीच्या संस्कृताध्ययनास त्यांचा पाठिंबा होता. १६-३-१९१६ रोजी लो. टिळकांच्या अध्यक्षतेखाली वे. शा. सं. शिवरामशास्त्री गोरे ह्यांचे संस्कृत पाठशाळांची सुधारणा ह्या विषयावर व्याख्यान झाले होते. ह्या व्याख्यानाचे अध्यक्ष ह्या नात्याने लो. टिळक ह्यांनी मांडलेल्या विचारांवरून त्यांची सुधारणावादी दृष्टी दिसून येते. त्यावेळी त्यांनी जुन्या शास्त्रीलोकांमध्ये चौकसपणा नसतो अशी तक्रार केली आहे. ती यथार्थ असावी हे अगदी आज विद्यमान असलेल्या थोड्याशा पारंपारिक शास्त्रीमंडळींवरूनही लक्षात येऊ शकते. धार्मिक शिक्षण आणि संस्कार ह्यांसाठीही संस्कृत पाठशाळांची सुधारणा जरूर आहे, असे त्यांनी ह्याच प्रसंगी म्हटले होते (समग्र टिळक, ६, पा. ९१९).

अग्रलेख-रूपाने अनेकदा लो. टिळक ह्यांनी संस्कृतक्षेत्रातील विषयांवर लेखन केले आहे. उदाहरणार्थ, १९०५ च्या मार्च-एप्रिल-मे च्या केसरीमधील आठ अग्रलेखांतून त्यांनी चिं. वि. वैद्यांच्या महाभारतावरील ग्रंथावर विवेचन केले आहे. तसेच पां. गो. पारखी ह्यांच्या बाणभट्टावरील निबंधाचे परीक्षण त्यांनी २५-७-१९०५ च्या केसरीच्या अग्रलेखात केले आहे. पाश्चात्य संस्कृताभ्यासकांपैकी मॅक्सम्यूलर ह्यांच्याबद्दल लो. टिळकांना विशेष स्नेह होता. मॅक्सम्यूलर ह्यांनी इंग्लंडमधील रॉयल इन्स्टिटयूटमध्ये उपनिषदांवर तीन व्याख्याने दिली होती. ह्यासंबंधी लो. टिळकांनी मोक्षमूलरभट्टांचा वेदांत हा लेख (४-९-१८९४) लिहून मॅक्सम्यूलरचा गौरव केला. त्यात संस्कृत भाषेचे पुनरुज्जीवन करणाऱ्या शार्मण्य

पंडितांमध्ये मॅक्सम्यूलर अग्रगण्य म्हणून वर्णन त्यांनी केले. तसेच मॅक्सम्यूलर ह्या शब्दाचे संस्कृतीकरण करून त्याची एक व्युत्पत्ती सुचविली- मोक्षस्य मूलं राति (समग्र टिळक, ५, पा. २८). मॅक्सम्यूलरच्या मृत्यूनंतर लिहिलेल्या मृत्युलेखात (६-३-१९००) लो. टिळकांनी "स्वदेशे पूज्यते राजा विद्वान् सर्वत्र पूज्यते" अशी सुरुवात करून मॅक्सम्यूलरने संस्कृत, वेदविद्या ह्यांबद्दल पाश्चात्त्यांत पूज्यबुद्धी निर्माण केली असे म्हटले आहे (तोच ग्रंथ, पा. ८९७).

ह्याशिवाय "दत्तकाची आवश्यकता" (नोव्हें. डिसेंबर १८८३) ते मार्च १८८४) पर्यंत सात लेख लिहिले तेही धर्मशास्त्रीय अध्ययनाचे द्योतक आहेत. तसेच "न्हाणवली" ह्या विषयावरही त्यांनी चाकर लेख लिहिले होते. त्यातील चौथ्या लेखात (२०-२-१८८३) गर्भाधान ह्या संस्काराविषयी धर्मशास्त्रीय ग्रंथांच्या आधारे लेखन करून हा निधी आता आवश्यक नाही असे प्रतिपादले (समग्र टिळक, ५, पा. ३७ व पुढे). मनस्मृतीतील "न स्त्री स्वातंन्त्र्यमर्हति" ह्या प्रसिद्ध वाक्याच्या संबंधात रा. ब. रानडे ह्यांनी केलेल्या युक्तिवादाचे खंडन लो. टिळकांनी "रावबहादूर रानडे ह्यांचे अपूर्व युक्तिचापल्य" ह्या लेखांमध्ये (७-६-१८८७ आणि १४-६-१८८७) केले आहे. रा. ब. रानडे ह्यांनी वरील वाक्याचा स्वतंत्रपणे असा अर्थ केला होता, की स्त्रीचे उदरपोषण, पिता, पती इत्यादी करत असल्यामुळे ती त्याबाबत स्वतंत्र नाही; म्हणजे आर्थिक दृष्ट्या स्वतंत्र नाही. पण लो. टिळकांनी जुन्या संस्कृत टीकाकारांच्या पारंपारिक विवेचनानुसार असा अर्थ केला, की स्त्री कोणत्याच बाबतीत स्वतंत्र नाही; पिता, पती इत्यादी स्त्रीचे रक्षण करतात ह्याचा अर्थ उदरपोषण करतात असा नसून तिचे स्वैराचारापासून रक्षण करतात (ह्याबाबतीत त्यांनी विज्ञानेन्शवर ह्या टीकाकाराचा आधार घेतला आहे.) अशारितीने मनुस्मृतीतील वाक्याचे जुन्या टीकांच्या सहाय्याने स्पष्टीकरण करून लो. टिळक ह्यांनी "रा. बं. चे संस्कृतज्ञान बेताचेच" असा शेरा मारला आहे (समग्र टिळक, ५, पा. ९०), तो मनोरंजक वाटतो. जुन्या टीकाकारांनी एखाद्या पङ्क्तीचा विशिष्ट पद्धतीने अर्थ केला म्हणजे नव्याने कुणी काही अर्थ करूच नये असे त्यातून सूचित होते. जुन्या टीकाकारांनी दिलेले अर्थ नेहमीच बरोबर असतात असेही नाही. त्या अर्थाचे परीक्षण आणि अधिक चांगला अर्थ लावण्याचा प्रयत्न ह्यालाच लो. टिळकांच्या वरील लेखातून विरोध सूचित होतो. खुद्द टिळक गीतेच्या अर्थाच्या बाबतीत जुन्या टीकाकारांहून वेगळा अर्थ अनेकदा देतात हे येथे लक्षात ठेवले पाहिजे.

लो. टिळकांनी *Orion or Antiquity of Vedas* आणि *Arctic Home in the Vedas* हे दोन वेदविषयक इंग्रजी ग्रंथ आणि *गीतारहस्य* हा मराठी ग्रंथ अशा तीन ग्रंथांची रचना केली. पहिल्या दोन ग्रंथात वेदविषयक कालनिर्णय आणि स्थलनिर्णय असे अनुक्रमे विषय घेतले आहेत. भगवद्‌गीतेचा मुख्य संदेश। कर्मयोग हा आहे असा विचार *गीतारहस्यात* मांडला आहे. ह्या तीनही ग्रंथांचे काही ठळक विशेष सूत्ररूपाने सांगता येतील :- ह्या तीनही ग्रंथात प्रत्येकी काही तरी अभ्युपगम घेऊन तो मांडण्याचा प्रयत्न केला आहे. तीनही ग्रंथात त्यांचे मौलिक स्वतःचे असे

विचार आहेत. आपल्या मतांच्या प्रतिष्ठापनेसाठी आवश्यक असे विपुल पुरावे त्यांनी गोळा केले आहेत. त्यासाठी संस्कृत, वैदिक, अवेस्ताविषयक आणि अर्वाचीन अशा त्याच्या काळी उपलब्ध असलेल्या अनेक ग्रंथांचा त्यांनी अभ्यास केला होता. ग्रंथांची शैली "प्रबंध" किंवा "थेसिस्" ह्या शब्दांना शोभावी अशी आहे. "नामूलं लिख्यते किंचित्" हा संशोधनशास्त्रातील पहिला मूलभूत सिद्धान्त ह्या ग्रंथलेखनात त्यांनी उत्तमपणे पाळला आहे. त्यामुळे संदर्भ, टीपा, युक्तिवाद, आक्षेपांचे निराकरण, पूर्वपक्ष, उत्तरपक्ष, सिद्धान्त किंवा निष्कर्षांची मांडणी ह्या सर्ववैशिष्ट्यांमुळे ह्या लेखनात "निबंन्धन" किंवा "प्रबन्धन" हे तत्त्व सर्वत्र पाळले आहे असे दिसते. लो. टिळकानंतर महाराष्ट्रात अनेक कोशकार, सूचिकार, संपादक, अनुवादक, निबंधलेखक, वक्ते, ललित साहित्यिक झाले. पण महाराष्ट्रात प्रबंधकारांची परंपरा नाही. पीएच्.डी. पदवीचा प्रचार झाल्यानंतर प्रबंध किंवा थेसिस् हे शब्द गेल्या पन्नास वर्षांत आपल्या खूप परिचयाचे झाले आहेत. पण तरीही त्यांपैकी किती प्रबंध खरोखरच प्रबंध किंवा ग्रंथ ह्या शब्दाने वर्णन करण्यास पात्र असतील, किती प्रबंधात खरोखरी काहीतरी थेसिस् मांडला आहे हा प्रश्नच पडेल. "थेसिस्" शब्दाचा मूळ अर्थ "दर्शन" किंवा "दृष्टिकोण" असा आहे. लेखकाने स्वतःला एखाद्या विषयाचे दर्शन प्रबंधातून मांडावयाचे असते. त्यासाठी मूळ लेखकाला ते झालेले असावे लागते. लेखकाला स्वतःचे असे मत असावे लागते आणि ते मत सिद्ध करण्यासाठी त्याला डोंगराएवढा पुरावा उभा करावा लागतो. केवळ साधनसंकलन म्हणजे प्रबंध असू शकत नाही. ह्या सर्व गोष्टी विचारात घेता सुमारे शंभर वर्षांपूर्वीही लो. टिळकांनी "प्रबंध" हा शब्द ज्यांना यथार्थपणे लावता येईल असे तीन प्रबंध लिहिले हे फारच लक्षणीय गोष्ट आहे. अर्थात अशा लेखनासाठी लेखकाजवळ प्रतिभा, श्रम ह्या दोन्ही गोष्टी मोठ्या प्रमाणात आवश्यक असतात. आणि लो. टिळकांजवळ त्या होत्या. अशा आदर्श संशोधनाबद्दल त्यांना संमानपूर्वक डि. लिट् पदवी देणे आवश्यक होते. पण ते स्वातंत्र्यवादी आणि शासनसंस्थेच्या विरोधी असल्याने त्यांना त्या काळात पदवी मिळाली नाही. स्वातंत्र्यप्राप्तीनंतरही लो. टिळकांना अशी पदवी द्यावी असे विविध विद्यापीठात अधिकारपदांवर असलेल्या आणि शैक्षणिक क्षेत्रात मंडूकिक्स् (मंडूकांचे राजकारण) करणाऱ्या "पेटी" विद्वानांना वाटलेले नाही.

अशा ग्रंथलेखनासाठी खरे म्हणजे चांगल्या प्रकारच्या "हस्तिदंती मनोऱ्याची" आवश्यकता असते. लो. टिळकांच्या बाबतीत कारागृह हाच हस्तिदंती मनोरा ठरला. एरवीच्या त्यांच्या धकाधकीच्या जीवनात खरे म्हणजे त्यांच्यातील ग्रंथकार नष्ट होणे हेच अधिक सवभाविक ठरले असते. पण तसा तो नष्ट न होता पूर्ण उत्साहाने कार्य करीत राहिला.

लो. टिळकांचे ग्रंथप्रेम लक्षणीय होते. ग्रंथालयात कोणते पुस्तक कुठे ठेवले आहे, त्याचा रंग कसा आहे, इत्यादी गोष्टी त्यांच्या लक्षात असत. मंडाले येथील कारावासात असताना काही पुस्तके त्यांना आवश्यक असतील तशी ते मागवून घ्यावयाचे. एकदा सिद्धान्तकौमुदिचे पुस्तक मागवले असता ते न पाठवले गेल्यावर

त्यांनी एका पत्रात लिहिले आहे- "कौमुदीचे पुस्तक सापडत नाही म्हणता? मग काय ते सांडले?" (येथे "सांडणे" हे क्रियापद "रवणे" ह्या अर्थी वापरले आहे. सध्याच्या मराठीत असा प्रयोग कालबाह्य झाला आहे. केवळ एखादा द्रवपदार्थ भांड्यातून न कळतपणे खाली पडणे ह्या अर्थीच आता सांडणे ह्या क्रियापदाचा वापर होताना दिसतो.) अशी आणखीही काही पुस्तके गहाळ झाली असतील अशी शंका विचारून पुस्तकांबाबत काळजी घेण्याविषयी त्यांनी लिहिले आहे. संस्कृतविषयक आणि ज्ञानविषयक हे प्रेम डोळ्यात भरणारे आहे. एखाद्या ग्रंथप्रेमी विद्वानाला ग्रंथालयापासून शेकडो मैल दूर असताना ग्रंथ न मिळाल्यावर होणारी तगमग तसा अनुभव ज्यांनी घेतला असेल त्यांनाच कळेल (वरील पत्राचा संदर्भ २ ऑगस्ट १९१३चे पत्र, समग्र केळकर, २, पृ. ४३८) संस्कृताध्ययनाला पोषक म्हणून लो. टिळकांनी फ्रेंच आणि जर्मन भाषांच्या अध्ययनाचाही प्रयत्न केला होता. कारण पाश्चात्य अभ्यासकांनी आपले काही लेखन ह्या भाषांमध्ये केले आहे. पिशेल आणि गेल्डनेर ह्यांच्या *Vedische Studien* ह्या ग्रंथात आलेल्या काही वैदिक मंत्र्यांच्या अर्थाविषयी तसेच ल्युड्विग्, ग्रासमान् ह्यांनी केलेल्या अर्थाविषयी माहिती लो. टिळकांना रा. गो. भांडारकर ह्यांच्याकडून मिळाली ह्या गोष्टीचा लो. टिळकांनी *Orion* ह्या पुस्तकात कृतज्ञतापूर्वक निर्देश केला आहे (पा. १७५). एरवी प्रायः इंग्रजी ग्रंथाचाच उल्लेख लो. टिळकांच्या लेखनात येतो.

ओरायन ग्रंथाच्या प्रारंभी लो. टिळकांनी मॅक्सम्यूलरचे वेदकालविषयक मत उद्धृत केले आहे. मॅक्सम्यूलरचा वेदकालनिर्णय भाषाभ्यास आणि साहित्येतिहास ह्या पद्धतीवर आधारलेला आहे. लो. टिळक त्या पद्धतींचा स्वीकार करू इच्छित नाहीत. ह्या पद्धतींमुळे वेदांचे प्राचीनत्व नष्ट होते असे ते मानतात. वेदांचे प्राचीनत्व सिद्ध करण्यासाठी ते उद्युक्त झाले होते आणि त्यासाठी त्यांना ज्योतिःशास्त्राचा आधार वाटत होता. ज्योतिःशास्त्रीय पद्धतीविरुद्धचे आक्षेप दूर करण्याचा त्यांनी प्रयत्न केला. वेबर, श्रोडर् ह्या अभ्यासकांना वैदिक लोकांच्या ज्योतिःशास्त्रीय ज्ञानाबद्दल शंका होती. वैदिक लोक धातूशास्त्र, नौकानयन, रथज्ञान, कृषीविद्या ह्यांत प्रगत होते मग ज्योतिःशास्त्रात ते तसे कसे नसतील असे लो. टिळक विचारतात (पा. १७). उत्तरकालीन ग्रंथात वसंतसंपात वसंतर्तूच्या मध्ये असतो. तर वेदानुसार तो वसंतर्तूच्या प्रारंभी होता (पृ. २८). उत्तरायणाचा प्रारंभ वसंतसंपातातच होतो. आधुनिक कालगणनापद्धतीत अश्विनी नक्षत्रात वसंतसंपात स्वीकारतात. वस्तुतः त्यासाठी रेवती नक्षत्राचा स्वीकार केला पाहिजे (पृ. ३६). पण तैत्तिरीयब्राह्मणात (१.१.२.१) कृत्तिका नक्षत्र प्रथम उल्लेखिलेले आहे (पृ. ३९). म्हणून तैत्तिरीयशाखेचा काळ तो की ज्याकाळी वसंतसंपात कृत्तिका नक्षत्रात होत होता. वसंतसंपात एका अंशाने जेव्हा मागे जातो तेव्हा बहात्तर वर्षे गेलेली असतात. प्रत्येक नक्षत्रात प्रायः चौदा अंश असतात. अशा प्रकारे कालगणना केल्यानंतर तैत्तिरीयसंहितेचा काळ ख्रिस्तपूर्व २३५० वर्षे असा ठरतो. ऋग्वेदकालात वसंतसंपात मृगशीर्ष नक्षत्रात होता. त्यामुळे ऋग्वेदाचा काळ ख्रिस्तपूर्व ६००० ते ४००० असा ठरतो. ऋभू, वृषाकपि ह्यांच्या उल्लेखांचा अर्थ लो. टिळकांनी

वसंतसंपातसूचक अशा रीतीने केला आहे.

लो. टिळक ह्यांच्या वेदविषयक लेखनात असे जाणवते की त्यांचे विवेचन अनेकदा वस्तुनिष्ठ नसून व्यक्तिनिष्ठ आहे. ऋग्वेदात ४.३३.४ ह्या मंत्रात असे म्हटले आहे की अगोह्याच्या आतिथ्यात ऋभू बारा दिवस राहिले. येथे अगोह्य हे विशेषनाम आहे ते एखाद्या राजाचे किंवा श्रीमंत व्यक्तीचे असू शकेल. विशेषनामाचा शब्दशः अर्थ करणे अनावश्यक असते. तसा केलाच तर "नाव सोनूबाई आणि हाती कथलाचा वाळा" असा विरोधाभास कसा असे प्रश्न येतील. अगोह्य शब्दाचा अर्थ "न लपवता येणारा" असा करून न लपवता येणारा म्हणजे सूर्य असा अर्थ करून बारा दिवस म्हणजे चांद्रवर्षात भर घालून येणारे सौर वर्षातील दिवस असा करणे हा सर्व ओढूनताणून केलेला आणि व्यक्तिनिष्ठ असा अर्थ वाटतो. *ओरायन्* मध्ये पृ. १०८ वर धन्वन् शब्दाचा अर्थ अन्तरिक्ष किंवा स्वर्ग असा त्यांनी केला आहे. तोही स्वप्रतिभेवर अवलंबून केलेला दिसतो. वस्तुतः त्याचा अर्थ (समद्राकाठीचा) कोरडा प्रदेश असा आहे. नेदीयसः वृषाकपेस्तमेहि गृहाँ उप (ऋ. १०.८६.२०) ह्या ओळीचा अर्थ O Vṛṣākapi, go to the house (in) the celestial sphere which is cut off and which contains some yojanas or stages (*ओरायन्* पृ. १८७) असा केलेला आहे. हे सगळे अर्थ काल्पनिक आणि व्यक्तिनिष्ठ आहेत.

The Arctic Home in the Vedas ह्या पुस्तकात वैदिक आर्यांचे मूळ वसतिस्थान उत्तरध्रुवप्रदेशात होते असा विचार मांडण्याचा लो. टिळकांनी प्रयत्न केला आहे. त्यासाठी त्यांनी भूशास्त्रविषयक त्या काळी प्रसिद्ध झालेले ग्रंथ वाचले होते (पा. ७). वेदकाळी आर्क्टिकप्रदेशात फार उष्ण नसलेला उन्हाळा आणि फार शीत नसलेला हिवाळा होता (पा. ३८). ऋग्वेदातील उषःकालच्या वर्णनावरून त्यावरून त्यावेळच्या उषःकालाचे प्रदीर्घत्व लक्षात येते. हे ध्रुवाजवळील प्रदेशातच शक्य आहे. सप्ताश्व, सप्तचक्र ह्या शब्दांवरून त्यावेळचे संवत्सर सात महिन्यांचे होते. असे वर्ष ध्रुवप्रदेशातच शक्य आहे असे म्हणूनच वैदिक आर्यांचे वसतिस्थान तेथेच होते असा युकितवाद केला आहे (पाप १८६-१८७). वैदिकसाहित्यात रात्रिक्रतूंचा उल्लेख आहे. असे क्रतूजेथे रात्री प्रदीर्घ आहेत तेथेच संभवतात. ब्राह्मणग्रंथकारांनी किंवा मीमांसकांनी- ज्यांना वैदिक आर्यांचे मूळ वसतिस्थान माहीत नव्हते- रात्रिशब्दाचा अर्थ दिवस असा केला आहे (पा. २१५) यज्ञ म्हणजे कालगणनेचे परिमाण होते (पा. ३३२) इन्द्राने केलेला शम्बराचा वध (पा. २८२), अत्रीची अश्विनांना उद्देशून प्रार्थना (पा. ३१५) इत्यादी अनेक कथांचे स्पष्टीकरण लो. टिळकांनी अशा प्रकारे केले आहे की त्यामुळे आर्यांचे मूळ वसतिस्थान उत्तरध्रुवप्रदेश असे दाखवता येईल. विश्वकाचा मुलगा विष्णापु हरवला असता अश्विनांनी त्याला पुनः वडिलांकडे आणून दिले, शयूच्या वांझ गायीत दूध भरले इत्यादी कथांचा अर्थ दीर्घरात्रीनंतरचा सूर्योदय अशा प्रकारे त्यांनी केला आहे (पा. ३१८). हे सर्व विवेचन अतिशय व्यक्तिनिष्ठ असून लो. टिळकांच्यावर भक्ति नसलेल्या अभ्यासकांना ते पटणे शक्य वाटत नाही. पा. १८७ वर It is

true that the evidence discussed in this chapter is mostly legendary असे म्हणून आपण दिलेले पुरावे कथास्वरूपाचे म्हणून दुर्बल आहेत अशी कबुली त्यांनी स्वतःच दिली आहे. वैदिक ग्रंथांचा ज्योतिश्शास्त्रीय आणि भूशास्त्रीय परिभाषेत अर्थ करणे त्यामुळेच सर्व अभ्यासकांना पटतेच असे नाही. *गीतारहस्या*च्या बाबतीत मात्र गीतेचे प्रतिपादन निवृत्तिमार्गी नसून प्रवृत्तिमार्गी आहे हे विवेचन तुलनेने जास्त वस्तुनिष्ठ आहे. त्यामुळे तेही सर्वमान्य होण्याजोगे नसले तरी वेदाच्या स्थळकाळनिर्णयाइतके व्यक्तिनिष्ठ नाही. म्हणून गीतारहयाच्या बाबतीत शंकराचार्यांच्या अनुयायांनी निदान काही चर्चा केली. पण *ओरायन* आणि *आर्क्टिक होम् इन् द वेदज्* ह्याबाबतीत मात्र गेल्या सुमारे शंभर वर्षात फारशी चर्चा केली गेली नाही. ह्याचे एक कारण त्या ग्रंथातील विवेचन व्यक्तिनिष्ठ असणे हे आहे. ह्या बाबतीत फ्रेंच अभ्यासक बर्गेन्य आणि त्याच्याबाबतीत लुई रनू ह्यांच्या विचारांची आठवण येते. बर्गेन्याच्या *La Religion Vedique* ह्या पुस्तकाविषयी रनू ह्यांनी असे म्हटले आहे की अभ्यासकांनी ते पुस्तक कधीच गंभीरतेने घेतले नाही, आणि जणू ते झालेच नाही अशा रीतीने अभ्यासकांच्या पिढ्याच्या पिढ्या आपली वेदविषयक चर्चा करतात. त्याचे कारण रनूच्या मते असे आहे की बर्गेन्यचे लेखक म्हणजे एक "डॉग्मा (राद्धान्त) कळला आहे. त्यात तो विषय एका बाजूने पूर्णतेला नेला आहे तर दुसऱ्या बाजूला तो मृत्यूच्या उंबरठ्यावर नेऊन ठेवला आहे) L. Renou, *Les Maitres de la Philologie Vedique,* Paris, 1928, p. 32) लो. टिळकांचे अनुयायी त्या लेखनाचा फक्त उल्लेख करतात. पण वेदाभ्यासक त्या लेखनाचा वापर करीत नाहीत त्याचे कारण बेर्ग्येन्यप्रमाणेच लो. टिळकांचेही लेखन अतिपूर्णतावादी पण व्यकितनिष्ठ आहे. ते स्वीकारताही येत नाही आणि नाकारताही येत नाही.

लो. टिळक आणि संस्कृत ह्या विषयासंदर्भात असा निष्कर्ष काढावासा वाटतो की टिळक मूलतः किंवा हाडाचे संस्कृत पंडित होते. गीतारहस्य ग्रंथ लिहिताना त्यांना अनेकवेळा प्रतिकूलतेशी सामना करावा लागला. सुटे कागद न देता बांधलेल्या वह्या देणे, केवळ शिसपेन्सिली आणि त्याही आधी टोक करून दिलेल्याच देणे, संदर्भ पुस्तकांच्या संख्येबाबतही बंधन ह्यांसारख्या अनेक प्रतिकूल घटकांना तोंड देत त्यांनी ग्रंथलेखन केले. तुरुंगातून सुटून पुण्याला आल्यावर मूळ हस्तलिखित कितीतरी दिवस त्यांना मिळाले नाही, तेव्हा "भिण्याचे काही कारण नाही वह्या सरकारच्या कबजात असल्या तरी ग्रंथ माझ्या डोक्यात आहे. फुरसतीच्या वेळी सिंहगडावर बसून ग्रंथ पुनः जशाचा तसा लिहून काढीन" (सहाव्या आवृत्तीची प्रस्तावना). हे उद्गार, लो. टिळक हे नुसते विद्वान् नव्हते तर "विद्वद्वीर" होते असे सूचित करतात. वीराला शोभणारा हा त्यांचा उत्साह त्याच्या वयाच्या साठीच्या आसपास ते असताना प्रकट झाला आहे. निरुक्तात म्हटले आहे की विद्या ह वै ब्राह्मणमाजगाम गोपाय मा शेवधिष्टेहमस्मि । तशी संस्कृतविद्या, वेदविद्या त्यांना अवगत झाली होती. त्यांची वृत्तपत्रसंपादक आणि स्वातंत्र्ययोद्धा ही भूमिका जास्त लोकाभिमुख असल्यामुळे त्यांना त्या क्षेत्रात जास्त प्रसिद्धी मिळाली. पण त्यांची

वैयक्तिक आवड किंवा कल संस्कृतपंडितांचा होता. त्यामुळेच संस्कृतपाण्डित्याला पोषक नसलेले अनेक व्याप सांभाळूनसुद्धा ते संस्कृतपंडित राहिले. फक्त त्यांना संस्कृतपंडित म्हणून मान्यता कमी प्रमाणात मिळाली.

Section 6

Miscellanea

गीताभाष्य : लोकमान्य आणि आद्य शंकराचार्य

भाग १

र. ग. दांडेकर

युगकर्ते, शककर्ते, विचारवंत, मुत्सद्दी तत्त्ववेत्ते आणि राज्यकर्ते हे ज्याप्रमाणे त्यांचा काळ बदलतात त्याचप्रमाणे ते ज्या कालखंडामध्ये वावरतात त्या कालखंडाने घडविलेले जातात. विचारवंत आणि त्याचा काल यांचा परस्पर संबंध असतो. हेच लोकमान्य आणि आद्यशंकराचार्य यांच्याही बाबतीत खरे आहे. अशी लोकोत्तर माणसे त्या त्या काळामध्ये जन्माला येणे ही त्या काळाची गरज असते असे म्हणल्यास वावगे ठरणार नाही. नेपोलियनबद्दल जसे विधान आहे की तो फ्रेंच राज्यक्रांतीचे अपत्य आहे त्याचप्रमाणे लोकमान्य हे भारतीय स्वातंत्र्यसंग्रामाचे आणि आद्य शंकराचार्य वैदिकधर्म तत्त्वज्ञानाच्या पुनरुत्थानाचे फलित आहे किंवा उलट रीतीने भारतीय स्वातंत्र्यसंग्राम आणि वैदिक धर्म तत्त्वज्ञानाच्या पुनरुत्थानाला पुढे मिळालेली दिशा ही अनुक्रमे लोकमान्य आणि आद्यशंकराचार्यांच्या कामगिरीचे फलित आहे. लोकमान्यांनी आणि आद्यशंकराचार्यांनी लिहिलेली गीताभाष्य यांना त्यांच्या त्यांच्या काळाचा संदर्भ आहे असे प्रतिपादन करणे हे लेखाचे उद्दिष्ट आहे.

लोकमान्यांनी गीतारहस्य मंडालेच्या कारावासामध्ये लिहिले. त्यांचे संपूर्ण जीवन त्यांनी हिंदुस्थानच्या स्वातंत्र्यासाठी समर्पित केले. या देशातील सर्वसामान्य माणसाला राजकीय स्वातंत्र्याच्या हक्काची जाणीव करून देणे, त्यासाठी झुंज देण्यास त्यांना प्रवृत्त करणे हे त्यांच्या जीविताचे सारसर्वस्व होते. त्यासाठी त्यांनी 'स्वराज्य हा माझा जन्मसिद्ध हक्क आहे' हा बीजमंत्र सिद्ध केला. 'इदं ब्राह्मं, इदं क्षात्रं, शापादपि शरादपि' असा द्रोणाचार्यांप्रमाणे भारतीय स्वातंत्र्य संग्रामाच्या कुरुक्षेत्रावर प्रखरपणे लढा दिलेला असा हा योद्धा इंग्रजी विद्या आणि शालजोडी दोन्ही अंगांवर यथार्थ गौरवाने मिरवणारा असा विचारवंत होणे नाही. या सम हा !

भगवद्गीतेवर भाष्य सर्वच पंडितांनी केले. त्याचा शेवटचा महत्त्वाचा भाष्यकार म्हणजे लोकमान्य टिळक. निवृत्तिमार्गाच्या प्रभावाखाली गेलेल्या परतंत्र भूमिका असलेल्या भारतीयांमध्ये त्यांच्या मानसिकतेत क्रांतिपूर्ण बदल व्हावा म्हणून लोकमान्यांनी 'गीतारहस्य' लिहिले. व ते जनतात्म्याला अर्पण केले. (आद्य शंकराचार्य : जीवन व विचार, पृ. ज०).

लोकमान्य लिहितात, "श्रीकृष्णाचे मनातून अर्जुनास संन्यास देऊन वैराग्याने भिक्षा मागत वनात किंवा कौपीन धारण करून व निंबाचा पाला खाऊन आमरणांत योगाभ्यासासाठी हिमालयावर पाठवायचे नव्हते अथवा धनुष्यबाणाऐवजी हातात टाळ, मृदुंग आणि वीणा देऊन त्यांच्या गजरात भक्तीने भगवन्नामघोष करीत प्रेमानंदाचे भरात कुरुक्षेत्राच्या धर्मभूमीवर भारतवर्षीय सकल क्षात्रसमाजापुढे बृहन्नडेप्रमाणे अर्जुनाला पुनश्च नृत्य करण्यास लावणयचाही भगवंताचा हेतू नव्हता. **अज्ञातवास संपून कुरुक्षेत्रावर घालायचा खडा नाच निराळ्या प्रकारचा होता.**" (गीतारहस्य, पृ. १६).

लोकमान्यांच्या समोर स्वातंत्र्याबद्दल उदासीन असलेला भारतीय समाज होता.त्याला स्वातंत्र्यासंबंधीच्या हक्काची जाणीव करून देऊन स्वातंत्र्यसंग्रामामध्ये उभे करण्याचे लक्ष्य

होते. गीतारहस्याचे महत्त्व तत्कालीन आणि प्रासंगिक होते असा या प्रतिपादनाचा अर्थ कोणी काढू नये. गीतारहस्यातील प्रतिपादनाचे महत्त्व सार्वकालिक आणि चिरंतन आहे.

गीतेच्या तात्पर्यनिर्णयासाठी ग्रंथ, प्रकरण किंवा वाक्ये यांचा अर्थनिर्णय करण्याच्या कामात अत्यंत कुशल जे मीमांसक त्यांचा ह्या बाबतीत सर्वास मान्य झालेला खालील दिलेला एक जुना श्लोक आहे.

उपक्रमोपसंहारौ अभ्यासोऽपूर्वता फलम् ।
अर्थवादोपपत्ती च लिङ्गं तात्पर्यनिर्णये ॥ (गीतारहस्य, पृ. १३)

या तात्पर्यनिर्णयाच्या कसोटीवर लोकमान्यांनी कर्मयोग हेच गीतेचे तात्पर्य होय असा दावा केला आहे.

आद्य शंकराचार्यांचे मते "गीता हे योगशास्त्र आहे. कर्मयोगशास्त्र नव्हे. गीताशास्त्राचे मुख्य प्रयोजन मोक्षच... शोक व मोह हे संसाराचे बीज... तो संसार कायमचा संपविण्यासाठी सर्वकर्मसंन्यास हवा" (आद्य शंकराचार्य : जीवन व विचार, पृ. ८०-८१)

"शांकरयुग तयार झाले ते बौद्धधर्माच्या यशस्वितेच्या पार्श्वभूमीवर. या दोघांच्यात काही साधर्म्य पण बराच फरकही होता. तरीही त्या दोघांच्या धार्मिक उपपत्तींना समाजात जोरदार प्रतिसाद मिळतो याचे कारण त्या त्या वेळच्या धार्मिक व सामाजिक प्रथांच्या संदर्भात मिळते." (उपर्युक्त, पृ. ८४)

आद्य शंकराचार्यांच्याबद्दल लोकमान्यांनी मार्मिक विधान केले आहे. "शालिवाहन शकापूर्वी सुमारे सहासातशे वर्षे जैन व बौद्ध धर्माचे जनक जन्मले. शंकराचार्यांचा जन्म शालिवाहन शकानंतर सहाशे वर्षांनी झाला. या दरम्यानच्या अवधीत धर्मासाठी झटणाऱ्या बद्ध यतींच्या संघाचे वैभव लोकांच्या डोळ्यापुढे असल्याने यतिधर्माबद्दलची एक प्रकारची आवड व आदरबुद्धी शंकराचार्यांच्या जन्मापूर्वीच लोकांत उत्पन्न झाली होती आणि जैन व बौद्ध धर्माचे जर शंकराचार्यांनी खंडन केले तरी प्रतिधर्माबद्दल लोकांत जी आदरबुद्धी उत्पन्न झाली होती तिलाच वैदिक स्वरूप देऊन बौद्ध धर्माच्या ऐवजी वैदिक धर्माच्या संस्थापनेसाठी झटणारे तितकेच उद्योग संन्यासी त्यांनी तयार केले." (गीतारहस्य, पृ. ३०२)

ज्या कालखंडामध्ये आद्यशंकराचार्य झाले त्या कालखंडातील घटनांच्या पार्श्व-भूमीवर शंकरतत्त्वज्ञानाचे आकलन केले पाहिजे. ते आकलन जास्त सुलभ आणि योग्य होईल. तेच लोकमान्यांबद्दल आणि तेच सर्व विचारवंतांबद्दल म्हणता येईल. तत्त्वज्ञानाचा इतिहास हा केवळ तत्त्वज्ञानात्मक संकल्पनांचा इतिहास नसून तो त्या त्या काळातील वैचारिक संघर्षाचा परिणाम असतो. त्या वैचारिक संघर्षाला, सामाजिक, धार्मिक, आर्थिक इत्यादी परिमाणे असतात. या दृष्टीने तत्त्वज्ञानाच्या इतिहासाचे केलेले आकलन हे रोचक, उद्बोधक आणि सार्थ ठरते अन्यथा ते नीरस शुद्ध आणि निरर्थक होते.

संदर्भ

१) **गीतारहस्य,** ले. बाळ गंगाधर टिळक, आवृत्ती विसावी, प्रकाशक दी. ज. टिळक, पुणे, २०००.

२) **आद्य शंकराचार्य : जीवन आणि विचार,** ले. तर्कतीर्थ लक्ष्मणशास्त्री जोशी, संपादक अरुंधती खंडकर, श्रीविद्या प्रकाशन, पुणे, १९९७.

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गीताभाष्य : लोकमान्य आणि आद्य शंकराचार्य
भाग २
र. ग. दांडेकर

कर्मयोग आणि ज्ञानयोग यामध्ये कोणते अंतर आचार्यांनी स्पष्ट केले आहे आणि कर्मयोगाचे त्यांनी कसे विवरण केले आहे हे अभ्यासिणे, त्याचप्रमाणे गीताशास्त्राचे तात्पर्य लोकमान्यांनी आणि आचार्यांनी जे प्रतिपादन केले आहे. त्यामध्ये किती परस्परविरोध आहे, याचा शोध घेणे, हे माझ्या या लेखाचे उद्दिष्ट आहे.

माझे स्वजन-स्वबांधव-विशेषतः गुरुजन माझ्यासमोर युद्धाला उभे ठाकले असताना त्यांच्याशी युद्ध करण्यापेक्षा, मी भिक्षा मागून निर्वाह करतो, असे अर्जुनाने भगवान श्रीकृष्णाला सांगितले व गांडीव धनुष्य सोडून तो रथात बसून राहिला. 'मी तुला शरण आलो असून मी काय करू या संबंधी मला मार्गदर्शन कर'- अशी भूमिका त्याने घेतली. श्रीकृष्णाने त्याला उपदेश केला आणि तो युद्धाला पुन्हा उभा राहिला आणि त्याने युद्ध केले. युद्धापासून "निवृत्त" झालेला अर्जुन युद्ध "प्रवृत्त" होतो, याचा नेमका अर्थ काय? यामध्ये परस्पर विरोध आहे काय? हाही एक प्रश्न उपस्थित होतो. या आकलनासाठी आचार्यांनी कर्मयोगाचे आपल्या गीताभाष्यामध्ये जे विवेचन केले आहे ते पाहणे जरूरीचे आहे. कर्मयोग आणि ज्ञानयोग यांतील सकृतदर्शनी जो विरोध वाटतो तो ज्ञानोत्तर कर्म करायचे किंवा नाही, या संबंधीचा आहे. कर्म संन्यासानेच मोक्ष प्राप्त होतो. ज्ञानानेच मोक्ष प्राप्त होतो या आचार्यांच्या विधानामुळे त्याचा अर्थ काय घ्यायचा हेही पाहणे आवश्यक आहे. हे सर्व करण्यासाठी आचार्यांनी कर्मयोगाबद्दल काय विवेचन केले आहे, ते प्रथम पाहणे क्रमप्राप्त आहे.

'वेदोक्त धर्म दोन प्रकारचा आहे. एक 'प्रवृत्तिरूप' दुसरा 'निवृत्तिरूप' (पृ. १३).

'शोक मोहरूपी या महासमुद्रामध्ये बुडालेल्या अर्जुनाला दोन्ही प्रकारच्या वैदिक धर्मांचा उपदेश केला ॥' (पृ. १४).

परंतु या प्रवृत्तिपर धर्मामध्ये ज्यावेळी धर्माचे अनुष्ठान करणाऱ्या लोकांच्या अंतःकरणामध्ये कामना, इच्छा यांचा जोर झाला, तेव्हा विवेक आणि व्यवहारिक बुद्धीचा ऱ्हास होऊन अधर्माची वृद्धी झाली.

ज्ञाननिष्ठा आणि कर्मनिष्ठा परस्परांपेक्षा स्वतंत्र अशा दोन प्रकारच्या भिन्न अशा बुद्धीमध्ये असतात. आत्मा अकर्ता आहे, हा निश्चय ज्या बुद्धीने निर्माण होतो, ती सांख्य बुद्धी. अशा सांख्य बुद्धीचे जे अधिकारी आहेत, ते सांख्य योगी आहेत. परंतु ही बुद्धी निर्माण होण्याच्या आधी आत्मा आणि देह यांचे वेगळेपण, कर्तृ आणि भोक्तेपण मानणारा, धर्म-अधर्म यांचा विवेक करणारा जो मार्ग आहे, जी बुद्धी आहे, ती योगबुद्धी असून, ज्या कर्म करणाऱ्यांसाठी ती योग्य आहे ते (कर्म) योगी होत.'

आणि ही बुद्धी असलेले कर्मयोगी जरी स्वधर्माचरण करीत असले तरी सुद्धा त्यांचे मन, भाषा आणि शरीरक्रिया, फलाची अपेक्षा करणारी आणि अहंकार युक्त असते.' (पृ. २६)

याचा अर्थ आचार्यांच्या मते हा अज्ञानी लोकांचा कर्मयोग आहे. प्रवृत्तिरूपी धर्म या दोषांनी जोपर्यंत युक्त आहे आणि जोपर्यंत परमार्थतत्त्वविषयक ज्ञान की 'हे सर्व ब्रह्म आहे' कर्मयोग्याला नाही, तो पर्यंत त्याचा कर्मयोग-प्रवृत्तिपर धर्म त्यास मोक्षप्राप्ती देऊ शकत नाही, म्हणजे प्रवृत्तिरूपी धर्म - किंवा कर्मयोग मोक्षाचा मार्ग म्हणून शंकराचार्यांना अमान्य नाही. तर ज्ञानयुक्त कर्मयोग मोक्षमार्ग आहे. आचार्य म्हणतात, 'सांसारिक उन्नती हेच ज्याचे फल आहे असा जो प्रवृत्तिरूप धर्म वर्ण आणि आश्रम यांना अनुलक्षून सांगितला गेला आहे, आणि तो जरी स्वर्गादि प्राप्तीचे साधन असला तरी सुद्धा तो जर फलाची इच्छा - कामना सोडून, ईश्वरार्पण बुद्धीने केला, तर अंतःकरण शुद्धी करतो. त्याचप्रमाणे या शुद्ध अंतःकरण झालेल्या पुरुषाला ज्ञाननिष्ठेची योग्यता प्राप्त करून देतो आणि ज्ञानाची उत्पत्ती झाल्याने हा प्रवृत्तीरूप धर्म (कर्मयोग) मोक्षाचे कारण ठरतो. (पृ. १५).

म्हणजे कर्मयोगामधील कर्तृत्व आणि भोक्तेपणा अहंकार आणि फलाची इच्छा उणे केलीतर असा कर्मयोग, 'निष्काम कर्मयोग' मोक्षाचे साधन आहे, असे गीताशास्त्र सांगते असा आचार्यांचाही अभिप्राय आहे. लोकमान्यसुद्धा निष्काम कर्मयोग हा मोक्षसाधक असून गीतेचे तात्पर्य हेच आहे असे सांगतात. लोकमान्यांचा निष्काम कर्मयोग हा ज्ञानमूलक असल्याने लोकमान्य आणि आदि शंकराचार्य यांच्या मतामध्ये कर्मयोगाचे मोक्ष साधन असण्याबद्दल विरोध नाही, हे यावरून स्पष्ट होते. लोकमान्यांनी निष्काम कर्मयोग गीतेचा प्रतिपाद्य विषय आहे असे प्रतिपादन करताना मोक्ष संकल्पनेचा खोलवर विचार केला नाही, हा काही टीकाकारांचा आक्षेप चुकीचा आहे, हे सुद्धा यावरून स्पष्ट होते. मोक्ष हे ज्ञानाचे फलित आहे, ही भूमिका ज्याप्रमाणे आद्य शंकराचार्यांची आहे त्याचप्रमाणे ती लोकमान्यांचीही आहे.

आद्य शंकराचार्य म्हणतात 'परमकल्याण (मोक्ष) हेच ज्यांचे प्रयोजन आहे असे हे दोन्ही प्रकारचे धर्म (प्रवृत्तिरूप आणि निवृत्तिरूप) यांना अभिव्यक्त करणे हे गीताशास्त्राचे असाधारण प्रयोजन आहे.' (पृ. १६).

कर्म करण्याचा लोकमान्यांचा आग्रह-कर्म फलत्यागाची- निष्काम कर्मयोगाची - लोकमान्यांची भलावण आणि कर्मसंन्यासाची आद्य शंकराचार्यांची भूमिका परस्परविरोधी आहेत हे नक्की. यांच्यात तर विरोध आहे- यासंबंधी काय?

आद्य शंकराचार्य म्हणतात 'अज्ञान किंवा आसक्ती आदि दोषांनी जे कर्म करण्यास प्रवृत्त होतात अशा पुरुषांचे अंतःकरण यज्ञ, दान किंवा तपाने शुद्ध होते आणि त्याला परमार्थतत्त्वाचे सर्व ब्रह्म आहे, याचे ज्ञान देऊन तो अकर्ता आहे, याचेही ज्ञान होते.

असा पुरुष जरी लोकसंग्रहासाठी पहिल्या सारखेच कर्म करताना दिसला तरी त्याचे कर्म वास्तवात कर्मच नाही...' (पृष्ठ ३०).

अर्थात हा शंकराचार्यांचा युक्तिवाद ज्ञानाचा कर्माशी समुच्चय होत नाही, यासाठी जरी असला तरी, त्याचा अभिप्राय ज्ञान आणि कर्म स्वतंत्र आहेत हे दाखविणे हाच आहे. त्यामुळे कर्मयोग मोक्षाचे साधन आहे, ही शंकराचार्यांची जी भूमिका आहे ती खंडित करीत नाही.

उलट या युक्तिवादामध्ये कर्मसंन्यास आणि कर्मफलत्याग समान आहेत, ही आचार्यांची भूमिका स्पष्ट होते. ही समानता आचार्यांच्या मते यासाठी निर्माण होते की 'मी करतो' आणि

'मला कर्माचे फल पाहिजे, यांचा त्याग ज्ञानयोगी आणि ज्ञानोत्तर कर्मयोगी यांना समान आहे. याचा अर्थ असा की ज्ञानोत्तर कर्म जरी तार्किकदृष्ट्या आवश्यक नसले तरी कर्मयोगामध्ये ते संभवते आणि अशा प्रकारचे कर्मयोग्याचे ज्ञानोत्तर कर्म कर्मच नाही ही शंकराचार्यांची भूमिका आहे.

इतकेच नव्हे तर आचार्य म्हणतात 'भगवान् वासुदेवांनी केलेली क्षात्रकर्मे सुद्धा मोक्षासाठी ज्ञानाबरोबर जोडली जाऊ शकत नाही.' (पृ. ३०).

यामध्ये दोन महत्त्वाच्या गोष्टी आचार्यांनी सांगितल्या आहेत. १) मोक्ष ज्ञानांनी प्राप्त होतो, कर्मांनी नाही आणि २) ज्ञानप्राप्तीनंतर लोकसंग्रहार्थ कर्म संभवते, ज्ञानी माणसाचे कर्म, फलाची अपेक्षा न धरता व अहंकार सोडून केले असल्याने ते कर्मच नव्हे.

अशा प्रकारची भगवान् वासुदेव आणि जनकादि तत्त्वज्ञान्यांची ज्ञानोत्तर कर्मे लोकसंग्रहासाठी केली जातात आणि अशी कर्मे करून न केल्यासारखी असतात. म्हणून ज्ञानोत्तर कर्म संन्यास आणि कर्मयोग यांचा परस्पर विरोध नाही. त्यांचे म्हणजे शंकराचार्यांचे मत असे की तत्त्वज्ञानानी मुक्ति मिळते, कर्मासहित ज्ञानाने नाही. याच अर्थ मोक्ष प्राप्तीसाठी ज्ञान हे आवश्यक आणि पुरेसे आहे. कर्माची त्यासाठी आवश्यकताच नाही.

गीतेची सुरुवात आणि गीतेच्या उपसंहार यांचे औचित्य आहे हे कर्मयोगाप्रमाणेही आहे आणि ज्ञानयोगाप्रमाणेही आहे.

कर्मयोगाप्रमाणे ही आहे, हे लोकमान्यांनी दाखविले आहे, "युद्ध करणे हे तुझे कर्तव्य ते तू केलेच पाहिजेस आणि त्याप्रमाणे अर्जुनाने युद्ध केले."

आचार्य म्हणतात, 'जरी अर्जुन क्षात्रधर्माला अनुरूप असे युद्ध करण्यास तयार होता तरी शोक आणि मोहांनी त्याची विवेक आणि व्यवहारबुद्धी दडपली जाऊन तो युद्ध न करता भिक्षा मागून जीवन निर्वाह करण्याच्या दुसऱ्याच्या धर्माचे आचरण करण्यास प्रवृत्त झाला.'

'अशा रीतीने स्वधर्म सोडून आणि दुसऱ्याच्या निषिद्ध धर्माचे आचरण करणे हे नैसर्गिकरित्या ज्यांचे अंतःकरण शोकमोह या दोषांनी ग्रस्त असते त्यांच्याकडून घडते. (प . २६)

आचार्यांच्या मते 'या संसाराचे जे मूलभूत दोष आहेत-अशा शोक-मोहाचे कारण दाखविणे हे गीताशास्त्राचे प्रयोजन आहे' (पृ. २५)

म्हणून तत्त्वज्ञानाने अर्जुनाचा शोक आणि मोह नष्ट झाल्याने, तो स्वधर्माप्रमाणे आचरण करण्यास प्रवृत्त झाला हेही स्पष्ट होते.

निष्कर्ष - (अ) कर्मयोग आणि ज्ञानयोग ह्या दोन निष्ठा जरी स्वतंत्र असल्या तरी त्या परस्परविरोधी नाहीत. (ब) लोकमान्यांनी कालानुरूप गीतेचा अर्थ लावला तेच आचार्यांनीही केले. गीता हे मौलिक विचारांचे भांडार असून कालानुरूप त्यावर भाष्य करणारे आद्य शंकराचार्य आणि लोकमान्यांसारखे समर्थ आणि प्रतिभावान भाष्यकार जर निर्माण होतील तर मनुष्यमात्राला सर्व कालामध्ये आवश्यक ते मार्गदर्शन प्राप्त होऊ शकेल.

टीप : या लेखामध्ये दिलेले पृष्ठ क्रमांक (श्रीमत् भगवद् गीता शांकरभाष्य हिंदी अनुवाद सहित, गीता प्रेस गोरखपूर तेवीसावे संस्करण - अनुवादक- हरिकृष्णदास गोयंका या पुस्तकातील असून त्याचा मराठीमध्ये अनुवाद केला आहे.

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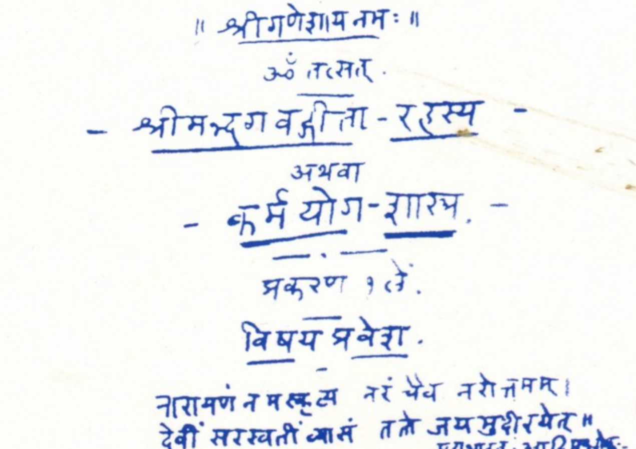
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